Croonian Lectures
ON
ADDISON'S DISEASE.

Delivered before the Royal College of Physicians,

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LECTURE II.—PART II.

IT will be remembered that, when dealing with the total number of 330 cases bearing upon the subject of Addison's disease, I set aside in the first instance, for subsequent discussion, all those which I had found reported as bronzing or discolouration of skin without disease of the supra-renal capsules. These cases are 21 in number, and a brief analysis will show that, in almost all of them, the abnormal pigmentation was due to one or other of the pathological conditions I have mentioned.

Two of the 21 cases, published by Vernois and Averbeck, precisely resemble the case of the woman exhibited by me to the Pathological Society; the ages, circumstances, uncleanly habits, and states of health, as well as the characters of the discolouration, having been nearly identical in all three patients. The patients in those two cases, however, died, when the capsules were found to be perfectly normal; and it is significant of the confusion which prevails on the subject, that Dr. Averbeck, who did not consider his own case as a true example of Addison's disease, nevertheless tabulated the parallel case of my patient, who recovered, among the so-called "cured cases" of that disease, which, as he justly observes, "must be received with suspicion." In three other cases, published by Puech and Gordon, there had been constitutional syphilis. In one of Puech's cases, which was complicated with phthisis, there was "an earthy colour of face, with large brown patches nearly covering breast and abdomen"; in the other the crusts of ecthyma on the chest showed normal-coloured skin beneath, proving the discolouration to be merely superficial, and the face was much lighter than the body; whilst, in Dr. Gordon's case, the skin is only said to have been first of a dirty yellow, and then of an olive hue, with chesnut-coloured specks on the scrotum; and Dr. Aitken, of Netley, to whom the healthy capsules were submitted for examination, attributed all the symptoms to syphilis. In two cases, recorded by Sloane and Luton, the darkening of the skin was associated with phthisis. In the first, the patient had also suffered from liver complaint, with permanent discolouration of skin; and, although the whole surface was bronzed, the mammæ around the nipples were much paler than the surrounding parts, and there were many white spots on the breast and back. In the second case, the whole surface is said to have had the earthy hue seen in the last stage of phthisis, with bistre patches on forehead and cheeks, and dirty-brown wrists and backs of hands. In two other cases, related by Gibb and May, there was disease of both the lungs and heart. Dr. Gibb's patient had aortic disease, which sufficiently accounted for the "pale-greenish bronze hue of the face and neck." In Mr. May's case the patient had also suffered from gout, and although the discolouration is said to have been most marked on the face, neck, axillæ, arms, and legs, the small brown spots scattered over the normal-coloured skin were quite uncharacteristic of Addison's disease, and point rather to the possible remains of some gouty eruption.

In four cases, published by Hutchinson, Harley, and Fricke, the discolouration dated from attacks of fever, jaundice, and hepatic derangement. Mr. Hutchinson's patient died of pneumonia after an illness of fourteen days. His skin had darkened from the time he had had yellow fever in the Crimea; the entire surface was more or less bronzed, and the pigment was chiefly in the rete mucosum, but the face and hands were the lightest parts. In one of Dr. George Harley's cases the darkening of skin followed an attack of jaundice, and remained during five years of good health; the face, neck, and arms were dark, but the discolouration on the body was diversified with irregular white patches; the patient died of diseased liver and ascites. In Dr. Harley's other case, the patient had suffered, during four years, from occasional hepatic symptoms and gastric disorder. The face, arms, and trunk were all of a dark bronze colour, except the scar of a burn on the breast; but apparently the discolouration was quite uniform, and, unfortunately, the condition of the liver was not noted. In Dr. Fricke's case the bronzing was limited to the forehead, face, and neck, and merged into jaundiced skin; the patient had suffered from ague, and died of cirrhosis of the liver.

A case seemingly allied to these, but far more complicated, is reported by Dr. Merkel. The man's skin had always been dark, and he had suffered from ague. He died of bronchitis and pleurisy, but he was found to have a large liver and spleen, with fatty degeneration of heart, liver, and kidneys. The whole surface was bronzed, equally on covered and uncovered parts, and there were grey-black patches on the buccal mucous membrane.

Two cases of discoloured skin, without disease of the supra-renal capsules, recorded by Dr. Bucknill and M. Regnard, occurred in women who were maniacal at the climacteric period of life—circumstances in which extreme duskiness of skin is by no means rare. Two cases of internal cancer, not involving the supra-renal capsules, are reported by Mitchell and Frémy as presenting a certain degree of discolouration of skin; but of the first it is only said that the sallow skin became of a leathern hue, much darker in eczematous scars and in the site of a blister than on other parts; and of the second, that some days before death the skin assumed, in places, a very evident bronze hue. Dr. Hodges found on the bodies of two old men, one of whom died insane and the other of old age and debility, darkening of skin, with a deeply bronzed hue of the genital organs, but the face and other parts were much less discoloured.

There still remains, however, a case of bronzed skin without disease of the supra-renal capsules, published by Rossbuch in Virchow's *Archiv* for 1870, which requires more special notice. The case is most fully and accurately recorded, and, on the supposition that it is a true case of Addison's disease, is made the basis of a new theory on the pathology of that disease, to which I must hereafter revert. The patient, a lady aged sixty-two, had always been prone to excitement and sleeplessness, and these natural tendencies had been aggravated by long-continued distress of mind. She suffered from anæmia, debility, loss of appetite, occasional vomiting, and violent pains in the epigastrium, and also in the right scapula, which she had hurt by a fall. These pains gradually extended round her body with the intensity of the neuralgia of shingles, and were always worst at night. Scleroderma began to develop on her right hand and forearm, and spread more or less to other parts of her body. The skin and subcutaneous tissue became as hard as stone, split, and formed fissures; and together with this very rare cutaneous affection appeared dark and extensive pigmentation of skin, of which large patches were sometimes developed in a single night. Meantime the patient's restlessness and misery of mind and body increased; she could bear no position in or out of bed for fifteen minutes together, and at length she became totally sleepless and actually deranged at night. Towards the close of life her pulse was quick, hard, and occasionally intermitting; she had albuminuria and anasarca; and sank under a slight attack of pneumonia after nine months' illness. The cerebellum was found to be very soft, the brain and lungs œdematous, and there was some fatty degeneration of the heart, liver, and kidneys; but the supra-renal capsules and neighbouring nerves were perfectly normal. The pigmentation of skin was coextensive with the scleroderma. Where palest it was produced by innumerable small dark points, and on the darkest parts there were dendritic patches of colourless skin. Under the microscope, the pigment was seen to be deposited chiefly in the papillæ and upper layers of the cutis. I need not pause to point out in detail the totally opposite characters of this discolouration of the skin from those of the discolouration in Addison's disease. The chief constitutional symptoms—namely, the morbid excitement and restlessness of mind and body—were also conditions totally uncharacteristic of Addison's disease; and the anæmia and other symptoms

which did resemble some of the characteristic constitutional symptoms were all fully accounted for by the obvious ailments, mental and physical, of the patient.

From this analysis of the twenty-one cases, published as cases of bronzing of skin without disease of the supra-renal capsules, I think it is evident that, in all of them, the discolouration of skin was due to other pathological causes, and that it presented in none of them the really characteristic features of the bronzed skin of Addison's disease. I should add, what in my view is even more important, that in none of these cases are any constitutional symptoms recorded but such as are easily referable to the morbid conditions which I have mentioned as present in each. They are of course only representative cases, as others of similar characters are continually occurring, though they have not been brought forward as bearing upon the subject of supra-renal disease.

The second allegation against the truth of Addison's discovery—namely, that "disease of the supra-renal capsules not unfrequently exists without producing any discolouration of skin"—is also, as I have said, perfectly true. Apart, however, from the small number of cases which have terminated before the development of the bronzing of skin, it may be positively enunciated that disease of the supra-renal capsules which is not attended by discolouration of skin presents totally different characters from the particular lesion of those organs which I have described.

Out of the thirty-seven cases which I have found published as examples of disease of the supra-renal capsules without bronzing of skin, twenty-four are cases of cancer of one or both capsules, invariably secondary to cancer of other neighbouring organs. In three of the other thirteen cases the capsules had undergone fatty or amyloid degeneration; in one case there was cirrhosis of the capsules, associated with kidney disease; whilst in three cases there were cysts, in three apoplexy, and in three sarcomatous, fatty, and hyperplastic tumours respectively, affecting, in seven cases out of the nine, only one of the two capsules.

It is obvious that none of these lesions bear any resemblance to the one particular lesion of the supra-renal capsules which is attended by discolouration of skin, nor were any constitutional symptoms present in any of the cases except such as were due to disease existing in other organs.

Hence, therefore, although it is quite certain that bronzing of skin may occur without the existence of any disease in the supra-renal capsules; and, again, that disease of the supra-renal capsules may exist, to the extent of entirely destroying their structure, without producing any bronzing of skin; it is also, on the other hand, equally clear that in the one case the bronzing of skin is not the peculiar discolouration indicative of the existence of Addison's disease, and that, in the other case (with the few exceptions already explained), the lesion in the supra-renal capsules is not the particular lesion of those organs which constitutes Addison's disease.

Were these the only misconceptions with respect to the relation between supra-renal disease and discolouration of skin, I might here close my review of this part of the subject; but, unfortunately, a small number of misunderstood cases have given a certain degree of prevalence to another quite opposite misconception—namely, that any disease of the supra-renal capsules involving destruction of their tissues will produce the same effects as the particular lesion characteristic of Addison's disease.

Had not attention been too entirely directed to the bronzing of skin, to the neglect of the constitutional symptoms, and of Addison's original reservation that other pathological causes must first be excluded, such a misconception could never have arisen. It began, however, with Addison himself, who published in his monograph four cases of cancer of the supra-renal capsules, as having been attended by some degree of discolouration of skin. I have also found published, since Addison's time, five cases of so-called cancer of the supra-renal capsules, and five cases of other diseases of the capsules associated with bronzing of skin. A glance at these fourteen cases, however, will show that they afford no true basis for this misconception. In the first of Addison's four cases the patient was a woman aged sixty—a time of life when the skin, even in healthy subjects, is apt to assume a dry brownish appearance, and she was suffering from extensive cancer of the left breast, lung, and surface of the liver. The only discolouration noted was a light-brown swarthy hue of the face, arms, and chest. The second case was that of a woman aged fifty-three, who died of cancer of the stomach. She had previously had an eruption on her body, and her skin is described as harsh, dry, and of a darkish hue. The folds of the axillæ were remarkably dark, and coloured patches, the size of the palm of the hand, were observed raised in wrinkles, and resembling slight ichthyosis. In the third case, which was that of a woman aged twenty-eight, who had died of cancer of the uterus, the only discolouration noticed was a peculiar dingy appearance of the skin, not very strongly marked. The fourth case was that of a man who had died of cancer of the thorax and lungs, and when cancer was unexpectedly found in one of the supra-renal capsules, it was ascertained from the clinical notes that the patient's face had presented a dingy hue. Two more recent cases of cancer of the capsules with discolouration of skin have been recorded by Drs. Gibb and Cayley. In Dr. Gibb's patient, cancer of the liver and right capsule were associated with a proliferous ovarian cyst, and it is only stated that there was distinct brownish discolouration of the abdomen, especially below the navel, and of the chest, especially over the sternum. Dr. Cayley's case was that of a woman aged forty-five, who died of cancer of the uterus, with secondary deposits in most of the abdominal organs. There was only a nodule of cancer, the size of a pea, which projected from the surface of the supra-renal capsule, but during the last month of life the surface was remarkably dusky and sallow, especially on the face and neck. I need scarcely point out that in none of these six cases was the discolouration observed in any degree characteristic of Addison's disease, and in none of them were any constitutional symptoms present but such as were due to the disease existing in other organs.

The three remaining cases of so-called cancer of the capsules, with discolouration of skin, are of a very different character, having all presented in a typical form the constitutional symptoms and bronzing of skin described in my first lecture, and having been in fact, as I believe, typical cases of Addison's disease. In the first of these cases, Dr. Mettenheimer says that the capsules were replaced by cancerous deposits; but he gives no description of them, and he was so little clear as to the nature of such deposits that he further reports the presence of some tuberculous or cancerous indurations in the left lung, and I cannot but think that, as no cancerous disease was found in any other organs, there is no doubt that the deposits in the capsules were also of the so-called tuberculous character. Dr. Duclos, in the second case, pronounces the disease in the capsules to have been "perfect scirrhus," but he had made apparently no microscopical examination, and his account of the condition of the organs is, on the contrary, a perfect description of the lesion peculiar to Addison's disease. The capsules, he says, formed tumours of the size and shape of eggs, very hard and much nodulated, and on section they grated against the scalpel, and presented precisely the appearance of lardaceous tissue. The third case is published by Dr. Gage, of Worcester, U.S., and had a history from which the existence of cancer in the supra-renal capsules was apparently inferred, though it is not expressly asserted. The patient, a lady aged fifty-one, was said to have had scirrhus of the right breast, which, though of several years' growth, had not involved any of the neighbouring lymphatic glands, and had been removed two years before her death without recurrence. Her last illness was of six months' duration, and both the constitutional symptoms and bronzing of skin were characteristic of Addison's disease. Both capsules were found to be much enlarged, and they were joined together by a thickened mass of enlarged and diseased lymphatic glands. The right capsule was adherent to the under-surface of the liver, and it is stated that from the point of attachment "several broad lines of reddish-white deposit, resembling soft cancer, radiated into the substance of the liver for one and a half inches." In this case, also, there appears to have been no microscopical examination of the diseased organs, and although the description is less clear than in the two previous cases, it presents on the whole a greater resemblance to the lesion in Addison's disease than to cancer. Besides, it must be borne in mind, that if these three cases were in truth cases of cancer of the supra-renal capsules, they are the only cases on record in which cancerous disease of those organs has ever given rise to the constitutional symptoms

and bronzing of skin characteristic of Addison's disease, or has ever been attended by fatal results without the implication of other important organs—circumstances so incredible that they seem to justify the hypothesis I have ventured to form concerning their real character.

Of the five cases of other diseases of the supra-renal capsules accompanied by discolouration of skin, two are cases of amyloid disease. In one of these, published by Averbeck, the patient, a man aged fifty-three, presented a dirty grey-brown colour of skin, deepest on the shoulders and back, whilst the face was of a lighter hue. In the other case, recorded by Wölff, the patient had suffered for years from profuse suppuration in a large hydatid cyst of the left kidney. A year before death his face and forehead acquired a dark-yellow, sunburnt hue, but the mucous membranes remained anæmic, and the only signs of discolouration on the body were a few lentil-sized black spots on the neck, abdomen, and extremities. The debility, loss of appetite, vomiting, and epigastric pains, which were present in this case, were all, as well as the emaciation, obvious results of the general abdominal disease and of the increasing discharge of fetid pus. In the remaining three cases there was fatty degeneration of the capsules. One, related by Sir Henry Thompson, is the case of an old woman, aged eighty-one, who died of bronchitis. Her skin was bronzed except on the face and hands, and the whole skin was permeated by colouring matter. In another of these cases, recorded by Charcot, the patient, a man aged fifty-seven, presented large brown patches on most parts of the body, with a slight but almost general lichenoid condition of skin; but the face, hands, and feet remained of normal hue. The third case, published by Schet, is worthy of fuller notice, because the discolouration of skin appears, from the description, to have been identical with that seen in Addison's disease. It dated, however, from nine years' work in the glowing sun of a tropical climate, where the man had suffered from repeated attacks of intermittent fever, which continued at intervals during the four years he survived his return to Europe. When he died, of epileptiform attacks following copious spirit-drinking, the spleen was found to be much enlarged, and the blood contained pigment-granules and an excess of white blood-corpuscles. The discolouration in this case was therefore doubtless due, in part, to the effects of climate, but mainly to melanæmia, arising from malarious poisoning and enlarged spleen. It seems tolerably clear that these fourteen cases afford no real grounds for the misconception, that any disease of the supra-renal capsules, involving destruction of their tissues, may produce the same effects as Addison's disease of those organs.

Another misconception, nearly allied to the last, appears to exist in some quarters, to the effect that any abnormal condition of the supra-renal capsules is sufficient to raise the question of the existence of Addison's disease. Under the influence, apparently, of this misapprehension, a considerable number of cases have been published in which the descriptions of the condition of the supra-renal capsules are too vague to justify any conclusions as to the nature of the lesion; whilst in others it seems doubtful whether there was any pathological lesion at all, and not rather some post-mortem change. A few cases, also, of doubtful and anomalous affections of the supra-renal capsules have been recorded, and notably one by Dr. Tuckwell, to show the necessity of caution in forming a diagnosis of such cases. It is impossible to discuss in detail the 32 cases I have placed in this group, but it is certain that the characteristic features of the supra-renal lesion in Addison's disease are not described in any one of them.

I must, however, advert to the most recent of these cases, which was published by Dr. Wickham Legg in the last volume of the St. Bartholomew's Hospital Reports. The patient, a woman aged thirty-seven, unquestionably exhibited some of the constitutional symptoms of Addison's disease, for she suffered during eighteen months from debility, shortness of breath, occasional vomiting of food, and constipation; and died, after five weeks' residence in the hospital, of vomiting and exhaustion. But, on the other hand, there was a distinct bilious tendency to explain the vomiting, the appetite was fair, and there was great thirst, with a red fissured tongue and swollen spongy gums, and a temperature above the normal. Moreover the patient had lost four stone in weight during her illness—an absolutely unprecedented circumstance in Addison's disease, unless when resulting from some serious coexisting wasting disease. The discoloured skin, also, was harsh, dry, and warm, instead of being soft and cool, and was not more deeply pigmented in the axillæ or mammary areolæ than at other parts. At the post-mortem examination the right supra-renal capsule could not be found, its place being occupied by a mass of yellow fat, and the left capsule was only represented by a small black body as thin as paper. This was certainly a most peculiar and interesting condition of the supra-renal capsules, but it obviously bore no relation whatever to Addison's disease of those organs, nor were the constitutional symptoms and discolouration of skin, taken as a whole, characteristic of that disease. The most difficult point in the case is the absence of any apparent cause of illness and death; for, that an abnormal condition of the nature described could produce active symptoms and fatal consequences, without the implication of any other organs, seems, to say the least of it, highly improbable.

One case remains, of the whole number collected, which represents another misconception so remarkable that it cannot be entirely passed over. The case is related by Dr. Gilliam (U.S.), and is that of a man aged forty-five, who suffered from many of the characteristic constitutional symptoms of Addison's disease. Gradually increasing debility, dyspnœa and palpitation on exertion, loss of appetite and tendency to vomiting, which became more obstinate until the patient died of exhaustion, were symptoms which, in the absence of other discoverable cause, might fairly lead to diagnosis of Addison's disease, although no discolouration of skin had appeared. But when, after death, not only the supra-renal capsules were found to be healthy, but advanced degeneration and atrophy of the gastric tubules was discovered, which, as the author himself remarks, fully accounted for all the symptoms, the diagnosis had clearly been a mistake. From this case, however, Dr. Gilliam concludes—first, that bronzing of skin is a quite unimportant feature of Addison's disease; and, secondly, that Addison's disease itself consists not in a lesion of the supra-renal capsules at all, but in disease of the gastric tubules. The misconception lying at the root of this singular theory appears to have been, that the presence of constitutional symptoms resembling those of Addison's disease was in itself sufficient evidence of the existence of that disease, and that, consequently, the lesion which had produced them might be safely pronounced to be the essential lesion of Addison's disease. That the lesion in the stomach was the cause of the gastric and other symptoms in the case referred to is obvious enough; but I trust I have made it equally clear, that no symptoms, obviously referable to other morbid conditions, can possibly justify any assumptions as to the existence of Addison's disease.

The question naturally arises, how misconceptions, so baseless in fact and disproved by such conclusive evidence, can have been so widely propagated and have survived so long? I believe that this has been mainly due to the great rarity of the disease, which has prevented all but a small minority of medical men from acquiring even the scanty degree of practical acquaintance with its true characters, which the observation of a single typical case would afford.

If, however, the relation between the clinical phenomena and the specific supra-renal lesion in Addison's disease may be considered as proved, the obscure pathological processes involved in that relation, and the equally obscure causes of the supra-renal lesion itself, will still afford ample field for investigation. To these parts of the subject I must endeavour to address myself in my next lecture, although perfectly conscious of the insurmountable difficulties they present, in the present vague and imperfect state of our knowledge with respect to many essential facts.

THERE is at the present time in Edward ward, St. Thomas's Hospital, a man upon whom Mr. Sydney Jones performed the operation of gastrotomy, for stricture of the œsophagus, on Wednesday, the 3rd of March, now three weeks since. The fistulous communication is complete. All sutures were removed more than a week ago, and the patient sits up. The pulse is 80, temperature normal, and the patient shows no untoward symptoms so far as the gastrotomy is concerned. We shall shortly publish fuller details of this case.

Lumleian Lectures

ON LIFE AND ON VITAL ACTION IN HEALTH AND DISEASE.

Delivered at the Royal College of Physicians,

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LECTURE I.—PART II.

BIOPLASM OF BACTERIUM.

THE living matter of the bacterium is probably the lowest, simplest form of bioplasm in nature. The entire organism is so minute as to be difficult of investigation. In 1864 I carefully examined bacteria under the one-fiftieth of an inch object-glass, and was able to demonstrate that, like the lower fungi, the bacterium consisted of bioplasm, with a layer of formed material upon its surface, as was proved by carefully crushing a very large bacterium while under observation. The membrane was ruptured, and not only was the bioplasm seen to escape, but it exhibited vital movements when free from its envelope.

Bacteria are for the most part elongated and of an oval form, and frequently the little staff-like particle exhibits a transverse line, or is constricted at or near the centre, indicating a tendency to divide at this point. In this way the division and multiplication of already existing particles take place. Bacteria vary much in size, some being as much as $\frac{1}{2500}$ of an inch in length, others so minute as to be visible only with the aid of the $\frac{1}{25}$ of an inch object-glass. I have figured some less than the $\frac{1}{10000}$ of an inch in diameter.

The germs from which the little particles spring are far more minute, and more difficult to identify. They appear as minute specks, the largest of them exhibiting a circular outline, and probably being spherical. The smallest are too minute to be discerned with the highest magnifying powers at our command. If a specimen of fluid, in which these particles are rapidly growing and multiplying, be carefully examined, many new points will be observed to appear from time to time. After watching with great care for a considerable time a given spot, I have assured myself that new particles actually come into existence; and that one does not, after intently watching for a time and concentrating the attention upon a certain space, merely *see* one coming into view after another, as star after star.

The material in which the minute germs of bacteria are embedded, and which, at least in part, consists of formed material produced by the bacteria, is much softer than the matter of which the capsule of fungi consists. It is, perhaps, almost as soft as mucus. I believe that even the most minute bacterium germ is surrounded by a layer of such soft formed matter, in which very minute particles of bioplasm divide and subdivide before they attain even the $\frac{1}{100000}$ of an inch in diameter. When therefore bacteria, in an early stage of development, dry, it is not possible to identify them. When moistened, the dry mass swells up, and the bioplasm in the soft mucus-like matter grows, each particle producing a fresh investment of formed material; and then, if the conditions are favourable, the germs either at once divide and subdivide for a time, or grow into perfect bacteria, which move freely and grow and multiply in this more advanced stage of development.

It would be difficult to say where bacteria germs do not exist. In air, in water, in the soil, adhering to tiny particles of every kind—in every region of the earth, from the poles to the equator, they are to be found. At all periods of the year they retain their vitality. Extreme dryness does not destroy them, and they withstand a temperature far below the freezing point. Under adverse circumstances they remain dormant, and are not destroyed by a degree of heat which is fatal probably to every other living organism. Dr. Bastian tells us that living germs of bacteria are destroyed at a temperature of 160°; but others are of opinion that, at least under certain circumstances, bacteria germs do not die at 212°, and may increase and multiply after having been exposed to this degree of heat.

In the substance of the tissues—nay, in the cells of almost all plants, and in the interstices of the tissues of many animals, bacteria germs exist. I know not what part of the body of man and the higher animals is entirely destitute of particles which, under favourable circumstances, develop into bacteria. Upon the skin and the surface of mucous membranes they exist in profusion, and they abound in the mouth and in the follicles and the glands. Changes in the process of digestion are soon followed by the multiplication of bacteria in every part of the alimentary canal, and within a few hours countless millions may be developed. They multiply in the secretions, under certain circumstances, almost as soon as these are formed; and I have adduced evidence to show that bacteria germs exist even in healthy blood. In the very substance of some cells I have seen them; and in many cases, in which little granules have been discerned in connexion with bioplasts, there is reason to believe that some of them are really bacteria germs, passive as long as the higher life is maintained in its integrity, but ready to grow and multiply the instant a change favourable to them and adverse to us shall occur.

As the germs of bacteria are found in healthy tissues and organisms, and grow and develop into bacteria when disintegration and decay occur, we shall not be surprised at their existence in disease. Bacteria prey upon morbid structures and upon the substances resulting from the death of morbid bioplasm. They are found in great number among pus-corpuscles which have ceased to live, and they grow and multiply with great rapidity in fluids which contain disease germs as soon as these begin to lose their specific powers and to undergo decomposition. In the tissues and fluids of the body altered by fevers they are abundant, and exist, as is well known, in many instances during life. In the evacuations of cholera, and not only of cholera, they are very numerous; and in the columnar epithelium of the small intestine I have found many. In all parts of the bodies, in the fluids, and amongst the solid tissues of animals destroyed by cattle plague, bacteria were present in varying number.

Germs so minute as those of bacteria are constantly passed over, and until they have grown somewhat it is not possible to identify them. This circumstance has led some to suppose that they are really formed anew from non-living matter, or from a substance in a transition state, which is neither living nor dead. But such a view is not supported by facts at present known, nor is there anything to justify any other conclusion than that all matter is either living or not living.

LIVING MATTER STRUCTURELESS.

As far as can be ascertained by examination, under an amplifying power of 5000 diameters, living matter throughout nature is colourless and *structureless*. Of course it may be mysteriously suggested that living matter may nevertheless possess structure, though no one can see it. Water *may* possess structure, but in such a suggestion the word "structure" has a meaning assigned different from that which is implied when the "structure" of tissues is referred to. No "structure" which can be conceived to exist in bioplasm can possibly account for its properties and actions. Neither is it in the least degree probable that, could we magnify it to any extent conceivable, any "structure" would be revealed, or that from the appearances described we should be able to explain how tissue and other things were formed from bioplasm, or why one kind of bioplasm forms dog, another sheep, and another man.

All the evidence I can collect is in favour of the conclusion that the powers of bioplasm do not depend in any way upon characters that can be fairly termed structural, and I cannot help fearing that some of my contemporaries, biased by previous education and influenced by the pressure put upon them by one or two scientific authorities, have consented to adopt views which they will find cannot be supported by facts or argument.

Not only does living matter exhibit no indications of structure, but the highest known form of living matter could not be distinguished from the lowest, and the lowest is not more unlike non-living matter than is the highest. One is, in fact, just as near and just as far from inorganic matter as the other. It has been said that certain organisms only differ from a fragment of albumen by their granular cha-

racter, but the statement is not correct. In the first place a granular appearance is not characteristic of living matter. If granules are discerned in it, they are not essential and are at least as likely to be lifeless as they are to be living particles. Living matter is, in fact, as free from granules as a fragment of the purest albumen. Secondly, the differences between any fragment of albumen and any living particle are enormous, but of a kind quite distinct from that suggested in the above statement.

If a portion of pure bioplasm be carefully examined with the highest powers at our command, and under the most favourable circumstances as to illumination, it will be found to be entirely devoid of granular character. Clear, transparent, and colourless, there will not be discernible in any part of it the faintest indication of structure. Nay, if motionless, its presence can only be recognised by the fact of it being a very little less perfectly transparent than the fluid which surrounds it, and by its refracting property being slightly different from that of the medium in which it lives.

The suggestion so often made that the relation between living and non-living matter is a close one, is as entirely groundless as the further suggestion that before very long the exact nature of the relation between the two will be cleared up, and the chasm between the living and the non-living bridged over. Neither is there anything to justify the statements made for the purpose of inducing people to believe that the non-living passes into the living by insensible gradations of some kind. There are many characters in which the living differs absolutely from any form of non-living matter yet discovered. One broad essential character distinctive of all living particles is a remarkable capacity of movement which has not been adequately accounted for, and I therefore propose to direct your attention to the movements peculiar to living matter.

OF VITAL MOVEMENTS.

Every form of living matter exhibits certain movements, the nature of which has not been determined. The remarkable movements of the common amœba, of the mucus-corpuscle, of the pus-corpuscle, and of the white blood-corpuscle, are familiar examples of vital movements, and these can be seen and studied by anyone who can use an object-glass magnifying 500 diameters or upwards. But every nutritive act, every form of increase and multiplication, each kind of growth, the production of buds or offsets, the development, the formation and increase of every tissue, involves active movement of the particles of which living matter is composed. Vital movements affect every form of living matter from the very lowest, supposed by some to have been formed direct from the non-living to the very highest which is concerned in the development of man; but in certain instances only can the movement be actually seen to occur under the microscope. By very slight alteration of the conditions existing during life the movements may be caused to cease, but in many cases in which no movement has been seen we have other evidence that it has occurred. Vital movement, there can be no doubt, accompanied the first dawn of life, and will continue to characterise living matter to the end of time. In fact, vital movements are essential. Their cessation is coincident with the cessation of life. Without them life is not conceivable; and it is equally impossible to conceive any form of matter not in a living state which manifests movements like those which characterise life.

I propose to consider the subject of vital movements under the four following heads—viz.:

1. Vital movement which may affect every part of a mass of living matter.
2. The movement of the constituent particles of a living mass which takes place in a direction from centre to circumference.
3. Movement of one portion of a mass of living matter from the rest.
4. The movement of a mass of living matter from one place to another.

Lastly, there are certain movements which are indirectly due to the vital movements of bioplasm, such as ciliary action, some movements connected with nerve actions, the movement of certain solid particles in cells, &c.; but these will not be discussed here, as I desire to restrict myself, as far as possible, to the consideration of the nature of the intimate changes in living bioplasm only. Neither shall I enter into a discussion concerning the nature of "contractility," which has by some been considered to be vital in the same sense as the movements which I am about to describe. I have, however, adduced reasons for removing contractility from the category of vital movements. I shall, therefore, only remark that contractility as it occurs in muscle is essentially distinct from the changes now to be discussed, and I may state that I have referred to this part of the subject in my work on "Protoplasm," third edition, page 209. The original paper was published in the Transactions of the Microscopical Society for 1866.

1. *Vital movements which may affect every part of a mass of living matter.*

These movements are undulatory in character, and may be seen in many forms of living matter. The wave-like movement gives rise to continual changes in the thickness of the mass, which, as a whole, may remain quite stationary. If the margin of the mass of living matter be studied, its outline will be observed to continually alter; a slight bulge at one place, a slight depression at another. In a few moments, perhaps, the part which projected will recede, and that which was depressed will become prominent, but with no regularity, with no alternation of movement. Such changes may be seen continually proceeding over every portion of a mass, in some cases occurring very quickly, in others so slowly that a specimen must be watched intently in one spot for some minutes, or the observer will fail to discern any change. In the amœba these movements are distinct enough, and can be studied without difficulty. The matter which moves is perfectly transparent and structureless. Granules suspended in it may be moved, but they are not the cause of the movement. Wave-like movements may be seen in young epithelial cells. I have seen them in epithelium from the throat and from the bladder of man, and I think there can be no doubt that they take place in living matter generally. In the white blood-corpuscle they have been studied by many. I have given a description of the movements as they occur in the mucus-corpuscle and in the pus-corpuscle, and have appended figures showing the changes observed during the course of a few seconds. I conceive that it is by movements of this kind that the little masses of bioplasm near the surface of the brain, which I believe are concerned in mental operations, act upon the delicate nerve fibres which are in contact with all parts of their surface. These are, I believe, the instruments through which the will operates upon the nerve-apparatus, by which its mandates are rendered evident.

2. *Movement of the constituent particles of a living mass which takes place in a direction from centre to circumference.*

The actual movements referred to under this head cannot be seen, for they may take place slowly, and affect particles too small to be seen with the highest powers. But that motion in the direction indicated does occur seems to me to be conclusively proved by the fact that in some spherical masses of growing bioplasm, which are increasing rapidly, a new centre (nucleus) appears in the very centre of the mass. After this has grown for a time another new centre (nucleolus) appears in the centre of the first. The new growth originates centrally, and a newer growth still more centrally. This involves a movement of constituent particles outwards. Now if bioplasts, in which this change is actually proceeding, be coloured with an ammoniacal solution of carmine, which in some instances may be effected in a few seconds, the remarkable fact will be observed that the new centres have been stained most deeply, although these are situated at the greatest distance from the surface in contact with the coloured solution. All "nuclei" and "nucleoli" are new centres of growth, and invariably consist of living matter. An oil-globule may be formed in bioplasm, and may be called a "nucleus" or a "nucleolus"; but the formation of such a body is of no importance. It ought never to have received the name of "nucleus" and no one ever pretended that all nuclei were of this nature. True nuclei and nucleoli were considered of little importance; but if the evidence in favour of the view of their nature here advanced is correct—and I believe it to be incontrovertible,—nuclei and nucleoli must be regarded as *vital centres* which have originated in centres of living matter already existing.

The movement outwards of the constituent particles of bioplasm is, I venture to think, the circumstance which determines the flow of the nutrient fluid in the opposite

direction. The non-living pabulum, I think, flows to the centre of the particle of bioplasm. Certain of its constituents there begin to live, and then move outwards towards the circumference, their place being taken by new matter which reaches the centre.

3. *Movement of one portion of a mass of living matter from the rest.*

This form of vital movement can be seen without any difficulty. A bulge appears upon the surface of a mass of bioplasm. This gradually increases, and becomes pear-shaped. The projecting portion of the living matter moves away from the general mass, with which, however, it may remain connected for some time by a narrow pedicle. Such movement of living matter may be seen in the amœba, in the mucus-corpuscle, in pus-corpuscles, and in white blood-corpuscles, and many other forms of bioplasm. The bioplasm (nucleus) of the frog's red blood-corpuscle often completely divides into several portions, some of which I have seen make their way through the surrounding coloured material into the liquor sanguinis beyond. I have described the phenomenon under consideration as it occurs in the growth and multiplication of yeast, and also in the growth of the mycelium of fungi. What determines the precise spot upon the surface where the formation of the bud or outgrowth commences it is difficult to say. It may be that the first movement takes place where there happens to be least resistance, but certainly it does not necessarily begin at the lowest point or at the highest, or at that part which happens to be nearest to the light, or at that most distant from it. The outgrowth does not usually contain a visible new centre, but its growth soon becomes accelerated, and the rate of formation of new bioplasm in the bud greatly exceeds that of the rest of the mass.

4. *Movement of a mass of living matter from place to place.*

This form of vital movement is also to be seen very distinctly, and so many instances of its occurrence have been recorded that it must be considered an attribute of bioplasm generally. In many cases, though the movement may not be seen, the evidence of its occurrence is nevertheless most conclusive. Not only amœbæ and allied forms, destitute of locomotor organs, move actively, but many of the bioplasm particles of man and the higher animals may be seen to move from one situation to another under the microscope. The movement of entire mucus-corpuscles, white blood-corpuscles, and pus-corpuscles over a space equal to more than twice the diameter of the corpuscle has been seen by me many times, and I have described the phenomenon in more than one of my works.

In white fibrous tissue, in muscle, nerve, yellow elastic tissue, and some other textures, there is distinct evidence of the movement of the formative bioplasm during the formation of the tissue. In some instances I have satisfied myself that an elongated mass of bioplasm has divided longitudinally or obliquely into two parts, which have moved away from one another in opposite directions, one forming the upper and the other the lower part of the same fibre. The thickening of many fibres results from the formation of new matter from the oval mass of bioplasm as it moves backwards and forwards upon the surface. Before 1861 I demonstrated the bioplasm of yellow elastic tissue which had not been previously observed, and showed that new tissue was formed from the bioplasm as it moved over the surface of the fibre.* In some cases the bioplasm is prevented from moving from place to place in consequence of being imprisoned in a cavity, but it may continue to move actively nevertheless. Thus, in many plant-cells the bioplasm moves round and round the circumference just within the cell-wall. In many cases the direction of rotation is that of a spiral, and formed matter, produced by transformation of the bioplasm, is deposited during the movement. The result is a spiral or double spiral raised line of secondary deposit in the interior of the cell. Sometimes bundles of fibres are formed by the movement of the bioplasm in the interior of a cell after the "cell-wall" has been formed. The fibres of the cells of the cartilage of the epiglottis are produced in this way, and I have seen the bioplasm gradually tapering so as to form a delicate fibre, which seemed to have been spun off, as it were, from the bioplasm as it moved round and round the cell cavity.

* The Structure of the Simple Tissues, 1861, p. 118.

Of the several primary vital movements I have described, none can be imitated. They are peculiar to living matter, and not one of them has been explained by physical law. No mere physical or chemical attractions, or repulsions, on the part of any material particle at all resemble vital movements. Neither can these be adequately accounted for by attributing them to changes in the environment, for no conceivable changes outside would cause such movements. Nor is there any *machinery* in bioplasm to explain the movement.

Of the several movements of living matter I believe those which affect the ultimate living particles of bioplasm never cease. That moving of matter from centre which involves the movement of pabulum in the opposite direction, I believe to be an essential phenomenon of life. The movement of living particles amongst one another, the movement of a portion of a living mass from the rest, the movement of a living mass as a whole, may entirely cease; but I cannot conceive the cessation of motion in a vital centre. The rate of movement certainly varies very much. At one time it may be very rapid, at another it may take place very slowly, but I cannot imagine absolute cessation of movement in the direction indicated, even for an instant, and its recurrence in that same centre.

I beg you to carefully consider the evidence upon which the views I have advanced are based. It has been affirmed that the phenomena occurring in the simplest living matter are not far removed from the phenomena of the non-living, and, like these, are to be explained mechanically; but only the assertion, not the explanation, is forthcoming. If but one class of these movements of living matter can be accounted for by any laws that are known, can you not insist that the laws be stated and that it be shown precisely by what means the particles of a living mass that is alive are enabled to move in any direction with equal facility? The particles uppermost in a mass of bioplasm do not move downwards more easily than those at the lowest point move in the opposite direction, neither do the roots of the tree grow into the soil with greater force than its stem shoots upwards.

In this lecture I have shown that in all parts of all living beings, at every period of life, are numerous masses of structureless living matter. From the lowest forms of life to the highest, this living matter or *bioplasm* manifests certain phenomena which cannot be accounted for by physics. Among these purely *vital phenomena* I have included certain movements which have not been accounted for. These movements are *vital*, and, as I believe, due to a peculiar power, "*vitality*."

In my next lecture I shall discuss the constitution of this living matter, try to show that the distinction between it and matter in every other state is *absolute*, and endeavour to convince you that the construction of every living body is primarily due to *vital* rather than to *physico-chemical actions*.

ON

RECENT IMPROVEMENTS IN THE DETAILS OF ANTISEPTIC SURGERY.

BY JOSEPH LISTER, F.R.S.,

PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY OF EDINBURGH.

(*Continued from p. 402.*)

IN the case of abscess beside the rectum a bit of lint soaked with carbolic oil is used for a drain, simply because in this situation it is not easy to keep in position a caoutchouc drainage-tube, which, under ordinary circumstances, is greatly to be preferred, since it does not at all obstruct the flow of discharge, and may be carried to any depth that is desired, and can be removed and reintroduced without difficulty. Hence a drainage-tube of comparatively small size introduced through a mere puncture in the skin, or through a small interval between stitches, is more efficient than a free incision or a widely gaping wound without the use of a tube. The tubes should vary in size in proportion to the quantity of discharge anticipated, from the thickness of a crow-quill to that of the little finger, and the holes in

them should have a diameter about half that of the tube. The outer end of the tube should be on a level with the skin, and it is conveniently maintained in this position by means of two pieces of silk passed with a needle through two opposite points of the edge of the tube, the ends of each thread being knotted at a distance of one or two inches from the tube. These knotted threads being placed straight upon the skin, one at each side, the knots exert friction upon the dressing bound down upon them, and prevent the tube from being pushed in, while the dressing itself keeps it from protruding, so that the orifice lies flush with the integument. When the tube has to be placed obliquely, its outer end must be cut obliquely in proportion, as shown in the accompanying sketch, otherwise it is apt to become partially buried and blocked up.

Another cause may lead to partial obstruction in chronic cases, such as spinal abscess—viz., the projection of fungoid masses of granulations through the holes in the tube so as to interfere with its calibre, and at the same time cause difficulty in extracting and reintroducing it. But this inconvenience is got over by having the holes restricted to the vicinity of the deeper end of the tube: for it seems to be chiefly at and near the integument that the granulations have this tendency to fungate; and in cases of this kind it is only at the deeper part of the tube that holes are required.

In recent wounds I used to think it needful to take out the tubes on the day after operation or accident to clear them of clotted blood. But I find this is wholly unnecessary, the shrinking of the clot apparently preventing it from interfering with the exit of discharge, so that a tube introduced at the time of an operation may be left in for three or four days, by which time the tissues around it will have been consolidated by organising blood or lymph into a smooth channel, into which the tube can be readily reinserted, which is by no means always the case if it is taken out the day after operation.

In large and deep wounds, where very free drainage is required, it is convenient instead of using one tube of very large calibre, to insert several of smaller size side by side. These, while quite as efficient as a single large one, do not separate the edges of the wound so much, and they can be afterwards withdrawn one after another as the discharge becomes reduced.

It is impossible to exaggerate the importance of drainage-tubes. In abscesses they must be employed till the cavity is completely closed; and in wounds not only are they invaluable during the first twenty-four hours, when the irritation caused by the action of the antiseptic on the tissues during an operation renders the flow of bloody serum more free than it would be without antiseptic management; but when the wound is of any considerable depth they should be used so long as even trifling serous oozing continues. For if the outlet proves insufficient for the free escape of the plasma still effused into the interior, the fluid, accumulating in the cavity, gives rise to tension, and hence to inflammatory disturbance, which may lead to suppuration and more or less opening up of the wound.

As an illustration of the value of drainage-tubes in the later stages of the treatment of wounds I may take a case of popliteal aneurism in which I tied the femoral artery last summer. The patient, a man thirty-eight years of age, who had been a soldier, was admitted into the Royal Infirmary on the 16th of June, with a swelling about as large as an orange in the left ham, with expansile pulsation and thrill, and other signs of aneurism; and he stated that the swelling had appeared suddenly five months previously, as he was sitting with his legs crossed, accompanied by a throbbing sensation, which had since continued to increase. The left leg was very weak, and was occasionally affected with darting pains, and the foot was somewhat œdematous. He had a worn, cachectic aspect, and the stethoscope indicated the presence of valvular disease of the heart, both at the mitral and the aortic orifice. Believing that, brilliant as are the results often obtained by compression, the patient's interest will on the average be best consulted by at once tying the femoral artery antiseptically, provided that the catgut be thoroughly trustworthy, and that the operation and after-treatment be really so conducted as to secure absence of putrefaction in the wound, I applied a ligature on the 24th of June, turning aside the edge of the sartorius so as to gain access to the vessel four inches and a half below Poupart's ligament, the situation which Mr. Syme used to advise in order to ensure a sufficient distance of the point of deligation from any considerable arterial branch; though indeed the antiseptic treatment seems to render this consideration of comparatively little importance, a fact which this case itself will be found to exemplify. The catgut employed was more substantial than that commonly used for tying vessels in wounds, being rather more than one-fiftieth of an inch thick. It had been prepared by myself more than a year before by the method described elsewhere,* and as the quality of the gut improves the longer it is retained in the preparing liquid, I knew that this specimen was thoroughly trustworthy. The ends of the gut were cut off near the reef knot in which it was tied. The operation was performed under the spray, and with such precautions as the germ theory dictates.

And here I may take the opportunity of enforcing one of these precautions, which I observe is apt to be overlooked. If a knife or other instrument, after being used during an operation, is temporarily set aside or even withdrawn for ever so short a time from the antiseptic atmosphere of the spray, it must be cleansed afresh with carbolic lotion, whether by means of a sponge or by rubbing it in the spray near the nozzle of the apparatus, where the liquid is little mixed with air, otherwise septic material mingled with the blood on the instrument, failing to be purified by merely passing rapidly through the spray, may be carried in an active condition into the depths of the wound. This is one of those essential points which I believe nothing but a knowledge of the great importance of avoiding putrefaction and a lively sense of the presence of septic ferments diffused in the world around us† will enable the operator to keep vigilantly in mind.

The edges of the incision were brought together by carbolised silk sutures,‡ except at one part, where two drainage-tubes of rather small calibre were placed side by side, communicating with the deepest part of the wound, and the gauze dressing was applied as usual with a strip of oiled silk protective over the line of incision, and the patient being put to bed, the foot and leg were enveloped in cotton-wool. Next day, the dressing, being changed, was found extensively stained with bloody serum, but there was no inflammatory blush or febrile disturbance. On the following day the wound was again dressed, and one of the drainage-tubes was removed. The spray was of course used in changing the dressings, and I may remind the reader that it is of especial importance that it be fairly directed on the wound during the withdrawal of a drainage-tube, the place of which must necessarily be taken by air, which, if not purified by the spray, will be likely to be septic.

The wound being exposed again after an interval of two

* See Holmes's System of Surgery, 2nd edit., vol. v., p. 622.

† If anyone chooses to assume that the septic material is not of the nature of living organisms, but a so-called chemical ferment destitute of vitality, yet endowed with a power of self-multiplication equal to that of the organism associated with it, such a notion, unwarranted though I believe it to be by any scientific evidence, will in a practical point of view be equivalent to the germ theory, since it will inculcate precisely the same methods of antiseptic management. It seems important that this should be clearly understood, because it appears to be often imagined that authors who are not satisfied of the strict truth of the germ theory, but substitute for it the other only possible hypothesis, invalidate the antiseptic practice, which, I must repeat, is not affected in one tittle by this theoretical discrepancy.

‡ Prepared by immersing a reel of the silk in melted bees'-wax mixed with about a tenth part of carbolic acid, and drawing the thread through a dry cloth as it leaves the liquid, to remove superfluous wax.

days, the stitches were found to be causing a little tension, and were therefore all removed; but the temperature was normal, and the serous oozing diminishing. Two days later, or six days after the operation, the pain in the limb, of which he had complained at the last dressing, had left him; but a considerable serous stain being still found on the gauze, the drainage-tube was continued, though shortened by cutting off a piece from the deeper end. Eight days after the operation the cotton-wool was removed for the first time from the leg and ham. The foot was free from œdema, and otherwise natural in appearance, and the aneurismal tumour had become greatly reduced, being now only a flattened mass about one inch and a half across, free from pulsation. All trace of the jerking pain he had in the limb before the operation had left him, and his general appearance was much improved on what it was on admission. The wound being dressed, the line of incision was found entirely healed, except at the point occupied by the drainage-tube, and the serous stain on the dressing was so much diminished that I reduced the little tube to a quarter of an inch in length, and allowed three days to pass before the next dressing. On then exposing the wound, however, I was disappointed to find the serous stain on the gauze fully as great as on the last occasion, and pressure on the skin in the vicinity of the wound caused a drop of clear serum to escape. This had never been seen before, and implied that the shortened drainage-tube had not been answering its purpose completely, but had permitted a certain amount of serum to accumulate; and slight as this accumulation was, I knew from experience that it was enough to perpetuate serous oozing by the tension which it occasioned. I therefore substituted for the short drainage-tube another of the same calibre, but twice as long—viz., half an inch, being as deep as it could be passed without violence, and dressed again in two days. The result was such as I hoped. There was an almost entire absence of serous stain on the gauze, and nothing could be pressed out of the tube, which was now again slightly shortened. The dressing was then left untouched for four days, when the drainage-tube was found lying out of the wound, having been forced out by the consolidation going on in the interior. There was almost no stain upon the gauze, and nothing could be pressed out of the orifice where the tube had been. It was therefore finally abandoned, and by the 19th of July, twenty-one days after operation, the dressing being changed after an interval of six days, cicatrisation was found to be complete, not a drop of pus having appeared from first to last.

So late as the 13th of July, seventeen days after the operation, or at a later period than that at which a silk ligature applied without antiseptic means commonly separates, pulsation could be felt in the femoral artery as low down as the junction of the middle and lower thirds of the incision; or, in other words, down to the very site of the ligature. It appeared, therefore, that some branch of unusually large size must have taken origin so close to the part tied as to prevent entirely the formation of a superior coagulum; and it is probable that with an ordinary ligature the case might have terminated disastrously from secondary hæmorrhage. Thus we seem to have here an example of the safety of the antiseptic ligature in the vicinity of a considerable arterial branch.

But to return to the point which this case is intended to illustrate—viz., the value of the drainage-tube in the later stages of the treatment of wounds. Supposing that instead of substituting a longer tube for the shorter one on the eighth day after the operation, when a little serum was found to have accumulated, I had then given up the use of the tube altogether, the probability is that by the time of the next dressing, the outlet at the integument having become partially occluded by granulation and contraction, a greater amount of serum would have been pent up in the cavity, and that in course of time the additional tension so occasioned would have led to suppuration and to the opening up of the nearly cicatrised wound.

(To be continued.)

IT is stated that the leaders of the anti-vivisection movement have prepared a Bill, which is already in the hands of the Home Secretary, and for which they are anxious to obtain the support of the Government.

FOREIGN BODIES WITHIN THE EYE.

WITH THREE ILLUSTRATIVE CASES.

BY GEORGE LAWSON, F.R.C.S.,

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IT is now an established fact that if one eye has a foreign body lodged within it, the other eye is in a constant state of danger. Sympathetic ophthalmia may arise in the sound eye at any period after the accident. The original inflammation which the foreign body excited may have passed away, yet the danger continues, and a recurrence of the inflammation in the injured eye, which is certain to occur, is liable to give rise to sympathetic ophthalmia in the sound eye, which may lead either to its partial or complete destruction. Unfortunately we do not yet know of any certain means of subduing sympathetic ophthalmia. Much may be done by treatment and by the removal of the injured eye which has been the source of the irritation, but even in the most favourable cases the eye is always left more or less damaged. With this knowledge, my feeling is that whenever a foreign body is known to be lodged within the eye, if it can be seen, an attempt should be made to remove it, and failing to accomplish this, the eye should be excised; and I would advise this even though at the time the patient possessed with the injured eye a certain amount of sight. It is better to make certain of preserving the sound eye than to jeopardise its safety for the sake of the injured one.

To decide whether a foreign body is within the eye is, however, often a question of great difficulty. The history which the patient gives of the accident is frequently most inaccurate, and there may be an absence of all those symptoms which commonly lead to the determination that a foreign body is embedded within the globe. When, however, a foreign body is suspected, but not seen, and there are no symptoms to justify active treatment, the patient should be kept under close observation, as, after a lapse of time, changes may take place in the eye which may lead to a positive diagnosis. The history of Case 2 is an illustration of this fact, and it also shows how little reliance can be placed on the mere assertion of the patient, which is frequently only the impression he has gained from a partially-heard conversation.

The three following cases, which have been lately under my care at the Royal London Ophthalmic Hospital, show how varied are the symptoms which may be excited by a foreign body within the eye.

In the first case a lad was shot in the eye, and from the time of the injury in September until he came under my care in January, the eye had been a constant trouble. The inflammation which the foreign body had excited could not be arrested, and when I saw the patient the eye was still red and irritable, quite blind, soft, and beginning to shrink. The eye was excised, and the shot was found embedded in lymph near the ciliary processes.

In the second case, the man, a boiler-maker, had a wound at the margin of the cornea and sclerotic from a fragment of iron which flew off from the piece he was cutting with a chisel and hammer. He was himself satisfied that no portion of the iron had entered the globe. The eye was tolerably quiet; there was only slight redness, no pain nor dread of light, and the lens was not wounded, but was perfectly clear, and continued so. Without any inflammatory symptoms, the wound healed, and the man left the hospital; but he was ordered to come up from time to time to show himself. About ten weeks afterwards he returned to the hospital, complaining that he had gradually lost the sight of that eye, and could now only distinguish light in one direction. An examination with the ophthalmoscope showed a detachment of nearly the whole retina. In this patient there had been no pain from the time of the injury, and no external manifestation of inflammation; and, relying on the assertion of the man, we might fairly have concluded that there was no foreign body within the eye. The man, however, was kept under observation, and the subsequent progress of the

case proved conclusively that the loss of sight was due to the presence of a foreign body causing a detachment of the retina. The eye was excised, and a large piece of iron found embedded in the ciliary processes.

The third case was specially interesting, as its termination was most favourable. A shoemaker, whilst hammering a nail into a boot, chipped off a spiculum of iron about the size of a pin's point, which penetrated the cornea and iris and lodged in the lens. The patient was sent to me by Dr. Spurgin, of Northampton. On his admission into the hospital, an examination with the ophthalmoscope showed the foreign body lying in the lens, which had become cataractous. The hole in the iris through which the chip of iron had passed was distinctly visible. The object to be accomplished was to extract the lens, and with it the foreign body. This I fortunately succeeded in doing, and the man subsequently recovered without an unfavourable symptom, and left the hospital with a good eye.

CASE 1. *Shot in the eye; constant irritation; excision of eye.*—J. C——, aged thirteen, was admitted into the Royal London Ophthalmic Hospital in January, 1875, suffering from the effects of a shot in the right eye. The history he gave of himself was that on Sept. 26th he was standing about eight yards from where a gun was being fired, when a shot rebounded from a stone and penetrated his right eye. He had been under medical treatment, but the eye still continued painful and very irritable. The eye was blind, slightly shrunken, and its tension – T 3. As all the symptoms pointed to a foreign body with the globe, I advised that the eye should be removed, and to this the lad willingly consented. On afterwards making a section of the eye, a small shot was found buried in a mass of lymph near the ciliary processes. The boy left the hospital in a few days quite well.

CASE 2. *Chip of iron lodged within globe; with wound of cornea and sclerotic; no inflammatory symptoms; subsequent detachment of retina; excision of the eye.*—R. H——, aged twenty-five, a boiler-maker, was admitted into the Ophthalmic Hospital on October 2nd, 1874, having three weeks previously met with an injury to the left eye. Whilst cutting a piece of iron with a hammer and chisel, a fragment flew off and struck the eye, causing a wound on the inner side of the cornea, which extended slightly into the sclerotic, through which there was a small prolapse of the iris. The eye was quiet, there was only slight redness, no pain nor photophobia. The lens was certainly not wounded, as it was perfectly transparent. The man said that he felt sure that the piece of iron had not entered the globe. The eye was kept tied up, and a solution of atropine was dropped into it daily to keep the pupil under its influence. The patient apparently progressed most favourably, the wound healed, and in a fortnight he left the hospital. In the region of the wound, however, a small amount of lymph was seen just behind the ciliary processes. He was ordered, therefore, to keep the eye tied up, and abstain from work, and to come from time to time to the hospital so as to have his eye watched.

On Feb. 5th of this year the patient was readmitted into the hospital. He complained that his sight had gradually left him, and that he could only distinguish light in one direction. An examination with the ophthalmoscope showed that the retina was almost completely detached. It was now conclusive that there was a foreign body within the globe, and I strongly urged him to have the eye excised, and to this he consented. On making a section of the eye after it was removed, a rather large fragment of iron was found embedded in lymph lying just behind the ciliary processes, and close to the wound in the corneo-sclerotic margin.

CASE 3. *Fragment of iron lodged in the lens; extraction of lens with the foreign body; good result.*—J. L——, a shoemaker, aged twenty-three, was admitted into the Royal London Ophthalmic Hospital on Feb. 15th, 1875. His history was that whilst hammering some nails into a boot a piece of iron flew off and penetrated the left eye. He soon recovered from the primary irritation which the injury excited, but very shortly the sight began to fail. On his admission the eye was quite quiet and free from irritation. By examination with oblique illumination the lens was seen to be cataractous, and buried in its central and anterior portion was a fine spiculum of iron, about the size of the point of a pin. The hole in the iris through which the foreign body had passed was also distinctly visible.

In this patient it was clearly advisable to remove the lens, and with it the foreign body. I first made the ordinary upward section of the cornea, and removed a piece of iris. I next tore through the lens capsule, and gently introduced a scoop behind the lens, so as to withdraw it with the chip of iron from the eye, and this I fortunately succeeded in doing. The patient has since progressed without an untoward symptom.

Harley-street, Cavendish-square, W.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. IV. Proœmium.

ST. MARY'S HOSPITAL.

GANGRENE OF LUNG.

(Under the care of Dr. SIEVEKING.)

FOR the following notes we are indebted to Mr. Musgrave.

G. F——, aged thirty-eight, a potman, was admitted into the hospital on Feb. 12th, with marked symptoms of gangrene of the lung. His breath was so offensive as to necessitate his removal to an isolated ward, where he was surrounded with antiseptics. From what could be ascertained from the patient, he had been ill for nine months, suffering from cough, expectoration, dyspnœa, and hæmoptysis; and about a month before admission an attack of acute pneumonia supervened. Upon examination, the whole right back was found to be dull, and there was coarse tubular breathing at the supra-scapular fossa, and marked cavernous breathing about the middle of the scapula, leaving no doubt of the presence of a large cavity. There were moist râles over the whole of the right thorax, which was dull from the mamma downwards. Copious dirty-green, purulent, and fetid expectoration. Temperature 101·5°; pulse 130, small and compressible. He was ordered six ounces of brandy, as he seemed almost in a state of collapse. The treatment consisted chiefly of stimulants, with morphia and a quinine pill at night; solution of permanganate of potash was also given to disinfect the sputa.

Feb. 13th. — Patient complained of sore-throat and difficulty of deglutition, and was ordered an oxymel gargle.

14th.—Symptoms not aggravated. Passed a better night. Temperature 101·2°; expectoration fetid and very profuse—about two pints in twenty-four hours. He was put on the mineral acids and chlorate of potash.

15th.—Passed a good night. Pulse stronger, and dyspnœa not so urgent, but the quantity of the expectoration and the fetor are still undiminished.

On the 16th and 17th he remained in about the same condition.

18th.—Has had a bad night. Cough extremely distressing, and severe diarrhœa has come on. Temperature 101·5°. Brandy increased to eight ounces. Ordered the sulphuric acid and opium mixture of St. Mary's Hospital Pharmacopœia.

19th.—Diarrhœa still continues, and breath is very offensive. Ordered to inhale sulphurous acid (1 in 15).

20th.—Spent a restless night on account of the diarrhœa, but the dyspnœa is less after inhalation and the breath not so offensive. Temperature 101·4°. Compound kino powder was given for the diarrhœa.

21st.—Had a better night, the diarrhœa having been checked by the kino powder. Brandy increased to ten ounces.

22nd.—Diarrhœa slightly returned. Expectoration less, but still very fetid; dyspnœa less. Temperature 100·8°.

23rd.—Passed a bad night, diarrhœa being severe. Ex-

pectoration very profuse, purulent, and fetid; dyspnœa greater; cough incessant at night; pulse 112, weak and thready; temperature 101·3°.

24th.—Diarrhœa checked by opium and starch enema; dyspnœa great; pulse 130, very weak; temperature risen to 102·4°. Brandy increased to twelve ounces.

25th.—Diarrhœa has returned; expectoration less, but still very fetid. Pulse the same as yesterday; temperature 101·4°. On auscultation marked cavernous breathing was found over lower right chest; puerile breathing over left.

26th.—11 A.M.: Slept fairly well, and seems in good spirits. Diarrhœa less, and dyspnœa not so urgent, but expectoration still very fetid.—1 P.M.: A great change has taken place; respiration is hurried, and dyspnœa very urgent; countenance anxious and livid; face covered with cold clammy sweats. Temperature fallen to 99·5°; pulse quick and fluttering. Died at 2.35 P.M.

Autopsy.—There was a large gangrenous cavity at the back of the right lung, implicating the lower portion of the upper and superior part of the lower lobes, containing about six ounces of a dark, grumous, and fetid fluid. Middle and lower lobes of right lung in a state of grey hepatisation, and the whole lung impregnated with miliary tubercles. Left lung very congested, having a small vomica at the apex and tubercle throughout. Spleen soft, congested, and diffluent. Liver large and fatty. Signs of old pericarditis and endocarditis, with thickening of the valves.

Remarks.—The interest of the case consisted in the fact of the supervention upon pneumonia of gangrene—a rare event, and also in the comparatively long extension of life after well-marked symptoms of gangrene had set in, they having evidently commenced some time previous to the patient's admission into the hospital, when the cavity was at once diagnosed. Although the man denied having been a confirmed drunkard, he confessed that he had from his calling been generally compelled to take alcoholic stimulants in excess. The fatty degeneration of the liver confirmed the view previously entertained, that alcoholism was in a measure the cause of the impaired nutrition. The enfeebled state of the heart would tend to aggravate the anæmia, but there was nothing in the condition of the endocardium to justify the view that embolism was the immediate cause of the gangrene.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

CASES OF CATARACT.

(Under the care of Mr. POWER.)

CASE 1. *Retinitis pigmentosa; cataract; extraction.*—A. G——, aged sixty-six, a healthy-looking woman, was admitted into the hospital under Mr. Power, suffering from cataract in both eyes. The right eye had been useless for reading purposes for seven years, and with it she could only distinguish light from dark. The fundus was quite invisible. With the left, she could count fingers at six inches. The parts of the fundus that could be seen were affected with retinitis pigmentosa. She said the right was affected similarly long before the cataract appeared in it—in fact, in both the field of vision had been much diminished before any cataracts were diagnosed. Her bowels were regular, and appetite good. Mr. Power performed Graefe's "modified linear extraction" operation on the right eye, without chloroform. The section was completed perfectly, but just as the lens was passing through the incision, the patient violently contracted her orbicularis, and a considerable quantity of fluid vitreous escaped. A large piece of capsule remaining in the anterior chamber was removed with the canula forceps. Atropine (four grains to the ounce) was instilled, and a pad and bandage applied. She was sent to bed, and thirty grains of chloral hydrate given at night. The eye was dressed the next day, but not opened. She had slept well. Two days afterwards it was opened, and was looking very well, and did not present any inflammatory symptoms. She could count fingers at six inches. On the sixth day she was not doing so well. There was intense conjunctivitis, with chemosis, and apparently some suppuration in the anterior chamber. She was only able to discern a bright light. There was no pain; bowels regular; appetite good. Ordered two grains of sulphate of quinine every six hours. On the eleventh day the inflammation had nearly subsided, and she could see large objects, but the corneal wound gaped considerably, and there was a sero-cystic bulging from the edges, with protrusion of the iris. On the eighteenth day the wound was nearly healed, although fistulous openings remained, through which the aqueous continually oozed. The pupil looked clear. She continued in very good health. In three days more she could count fingers at one foot, and the fistulæ had closed; and she was discharged nine days afterwards with a healthy-looking eye; her vision being with convex 3 inches = $\frac{3}{144}$. With convex 2 she read No. 8 Snellen.

CASE 2. *Senile cataract; extraction.*—M. D——, aged seventy-five, had always enjoyed good health, but said she was subject to neuralgia, and attributed the dimness of vision in the left eye to a violent attack of it a year ago. The right eye had only recently begun to fail, and with it she could read No. 1½ Snellen's test types, and V = $\frac{3}{144}$. With the left eye should count fingers at two feet, and read letters of No. 20 Snellen at eight inches. Mr. Power performed a modified linear extraction on her left eye without chloroform. A strong solution of atropine was instilled, and a pad and bandage applied over both eyes. She did very well, sleeping without any narcotic, and complaining of no pain in the eye. Two days after the operation the incision in the cornea had united, and she could count fingers at one foot. She was ordered four ounces of sherry a day, as her pulse was rather feeble. A week afterwards she caught a bad cold, and had a sharp attack of conjunctivitis, which was soon checked by bathing the eye with some compound alum lotion, containing three grains of alum and one grain of sulphate of zinc to the ounce of water. She was discharged twenty-one days after the operation. When last seen—twenty days after leaving the hospital—she could read No. 2 Snellen with convex 2 inches, and her vision was $\frac{1}{144}$ convex 3.

CASE 3. *Senile cataract; extraction.*—S. P——, aged sixty-seven, a laundress, said her sight had always been very good until four years ago, when the right eye began to fail, and had been useless for reading purposes for the last two years. The left eye began to get dim two years ago, but she had been able to use it for ordinary work until within the last three weeks. She was a healthy woman and had never tried her eyes much. There was a well-marked arcus senilis in both eyes. Mr. Power removed the lens by the modified linear operation without chloroform. Atropine was instilled, a pad and bandage applied to both eyes, and she was sent to bed. She experienced shooting pains in her eye for a few days, but they were not severe, and did not prevent her sleeping well. On the third day, as her bowels had not been opened since the operation, she was ordered a pill of one grain of calomel and four grains of colocynth, which acted freely. The wound was healing well, there was no inflammation, and she could count fingers at one foot. Her appetite remained very good. One eye was uncovered on the fourth day; in three days more she got up; and the pad and bandage were replaced by a shade on the tenth day. Fifteen days after her admission she was discharged, being able to read No. 20 Snellen with 3½ convex glass, and V = $\frac{3}{144}$ with convex 4. A week afterwards she could read No. 4 Snellen with convex 3½.

CASE 4. *Senile cataract; extraction; removal of opaque capsule; iritis; closure of pupil.*—M. D——, aged fifty-nine, came from Ilminster, in Somersetshire, with cataract in both eyes. She had been gradually losing the sight of the left eye for five years, and it had been useless to her for some time. With the right eye she could see to get about. Mr. Power did a modified linear extraction on the left eye, and a small quantity of vitreous fluid escaped. The capsule was adherent at the lower margin to the iris, and considerable force had to be employed in order to remove it. The wound healed readily, and she recovered without a bad symptom. The eye was dressed every day, and eight days after the operation she could see light clearly, and distinguish a hand at a distance of one foot. She went out thirteen days after the operation, a piece of opaque capsule still remaining in the pupil. Five weeks afterwards she again appeared, wishing to have the opaque portion removed. She was again placed under the influence of chloroform, and Mr. Power endeavoured to remove the capsule with the canula forceps. It was, however, very firmly attached to the iris, and its removal was with difficulty

accomplished after considerable traction had been applied. On the third day a sharp attack of iritis came on, which was unsuccessfully combated by leeches to the temples, aperients, and mercury-and-chalk with quinine. It went on for twenty days, causing intense pain, and the pupil became finally blocked up with lymph. She went out about three weeks after the second operation, just able to distinguish light from dark, and has not since then been seen.

CHILDREN'S HOSPITAL, BIRMINGHAM.

CASE OF INTUSSUSCEPTION.

(Under the care of Dr. MACKEY.)

JOHN B——, aged twelve months, and still at the breast, was brought into the out-patient room at 4 P.M. on Friday, June 26th, with the following history:—He had been well up to the 23rd, when, being costive, some magnesia was given to him. On the 24th the bowels were opened once, and about a quarter of an hour afterwards he seemed in great pain, and "began to squeal." The same evening he began to vomit, and continued to do so till the night of the 25th. From that time he seemed very ill, crying at times, and refusing to suck. There had been no motion since that of the 24th. No blood had passed from the bowel, and there was no urine.

When seen on the 26th the aspect of pain and collapse was very striking, the face was very pale and pinched, the lips and gums were cold, as also the extremities; the belly was hot, tender, and swollen. The breath also was cold. The child was placed in a warm bath for a few minutes, and had an enema of about a pint of warm water. Some blood and mucus passed. On careful examination of the abdomen dulness was found in both flanks, most marked in right iliac region, but no definite tumour could be detected. The front of the belly was tympanitic. The child was very restless, and occasionally uttered a sharp cry. By means of the bellows and an enema-pipe, air was gently and steadily injected for a few minutes, but apparently gave great pain, and was not therefore persisted in. The question of abdominal section presented itself, but owing to the moribund condition, there being fear lest operative interference should hasten death, and owing to some unavoidable delay that arose, and on account also of the opposition of the mother, the operation was, unfortunately, not performed. A few drops of brandy were to be given, hot poultices to be applied, and signs of reaction to be watched for; but about 7.30 P.M. slight convulsive attacks occurred, and the child died in the course of the night in a state of collapse.

The autopsy was performed on the 29th of June, in the presence of Mr. G. H. Evans, and of Mr. Messiter, house-surgeon. The abdomen was very green, somewhat dull on the left flank, but tympanitic elsewhere. On opening the cavity there was no adhesion; the peritoneum was normal, perhaps with some excess of fluid. The small intestine was fully distended; the ascending colon was readily reached, and found filled for about five inches with a semi-solid body, dark coloured. Tracing it towards the ileo-cæcal valve, this solid mass was found to be the ileum, which was pushed into the colon for the said length of five inches, carrying with it the greater part of the cæcum and part of the vermiform appendix. The large intestine beyond the intussusception was collapsed. On removing the affected part for more minute examination, the commencement of the colon was found to be rather tightly folded over itself; but there were no adhesions, and slight traction on both ends of the intestine readily withdrew the involved portion. Only sufficient was withdrawn to accurately verify this. Opening the colon from beyond the obstruction, the involuted ileum was found to be of a deep purple colour, with patchy erosion of its mucous membrane, which was pulpy, and bathed in grumous, pinkish fluid. The ileum was not actually gangrenous.

The specimen has been carefully prepared by Mr. Spiller, and placed in the museum of Queen's College, Birmingham.

Remarks.—This case well illustrates the principal points in diagnosis—viz., suddenness of onset of symptoms, their severity, the obstruction of bowels, vomiting, collapse, passage of blood, tumour, or at least localised dulness. It illustrates also unfortunately the average duration of life (three to six days) when such an accident occurs to an infant of twelve months old or under. At the same time it is an illustration of the fact that in such cases inflammation does not set in very early, and that strangulation is not, so far as can be judged after death, very tight. It is on this account chiefly that it is desired to place the case on record, complying with and fully endorsing the following observation of Mr. Hutchinson in his paper on the subject (THE LANCET, Nov. 22nd, 1873):—"It is very desirable that all who have the opportunity for post-mortem examination of intussusception cases should give special attention to the question as to whether an operation would have been practicable, and should record their results."

Reviewing the whole case with our present knowledge, one is inclined to wish that abdominal section had been more strongly insisted on. Had the child been seen twenty-four hours earlier, there would certainly have been a fair chance of a successful issue.

What seems the best plan of treatment for similar cases may be summarised as follows:—1. The warm bath and chloroform. 2. Copious injection of tepid milk and water by syphon apparatus. 3. Drop doses of tincture of opium every hour, under close supervision. 4. If there be no evident relief after as fair a trial as circumstances permit, then our *early* resource, and we may fairly call it now our *hopeful* resource, should be abdominal section.

BRADFORD INFIRMARY.

ABSCESS OF THE LIVER; RECOVERY.

(Under the care of Dr. R. G. ALEXANDER.)

MARY D——, aged thirty-nine, was admitted into the hospital Jan. 26th, 1872. Seven years ago she had an apoplectic seizure, during which she was unconscious for four or five hours, and which was followed by loss of power in the right arm and leg. From this attack she recovered in about six weeks, and remained pretty well until a year ago, when she began to complain of pain in the epigastric region, and nine months ago had an attack of jaundice. This was followed by loss of appetite and nausea, and three months ago she first noticed a swelling in the abdomen, and a throbbing, but not severe pain, in the most prominent part.

On admission, the patient's skin was dark and yellow, and there was a peculiar coppery appearance of the abdomen; the conjunctivæ were especially yellow. The hepatic dulness was much increased, and occupied the right hypochondriac and epigastric regions, extending from two inches below the right nipple to within an inch of the crista ilii; transversely it was also increased, and there was no resonant spot between the liver and the heart. The cardiac dulness was also increased, and there was no line of demarcation between it and the splenic dulness. The patient complained of pain in the hepatic region, and stated that ten days before admission she had rigors. These she had had occasionally for many weeks past. The tongue was slightly furred, and there was no appetite for solid food. The menstrual periods had become less frequent during the last year, and the pain was increased when they occurred. Urine acid, no albumen; fæces clay-coloured, no diarrhœa. Temperature 99·8°; pulse 100.

The patient continued in much the same condition as described, but the tumour steadily increased in size during February. The morning temperature varied from 99·8° to 101·8°, the evening temperature from 100·6° to 102°; the pulse varied from 90 to 110; fluctuation became distinct, the abscess more superficial, and on the 5th of March two ounces and a half of viscid pus was removed by the aspirator, with great relief to the patient, who had passed a painful and restless night. Poultices were applied, and a very small quantity of pus was afterwards discharged. From this time the patient continued rapidly to recover, and for a few months came as an out-patient occasionally, but had no relapse. She continued to take a quinine acid mixture, which seemed to be of much service. The hepatic dulness diminished, the skin and conjunctivæ lost their yellow cast, and she was restored to better health than she had enjoyed for many years.

Remarks.—This case well illustrates the fact that the liver is not a sensitive organ, for until the abscess became superficial there was no acute pain, the temperature was

not high nor the pulse rapid, but there was sufficient uneasiness to diagnose the complaint and distinguish it from hydatid disease. The cause was obscure, but the woman had lived all her life in a hot, close room, which would almost resemble a tropical climate. She seldom left the house.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting of this Society on the 3rd of March, Dr. Priestley, F.R.C.P., President, in the chair, the following gentlemen were elected Fellows:—R. J. Maitland Coffin, M.R.C.P.Ed. (Malta); Charles J. Cullingworth, M.R.C.S. (Manchester); John H. Ewart, L.R.C.P. (Manchester); P. Brown Giles, jun., L.R.C.P.Ed. (Hereford); Augustus Jukes, M.B. (St. Catherine's, Ontario); Alfred E. Aust Lawrence, M.D. (Bristol); Charles Liebman, M.D. (Trieste); Eugenio Rey, M.D. (Turin); Fred. W. Salzman, M.R.C.S. (Brighton); David E. Seton, M.D. (South Kensington); and Fred. Wm. Strange (Aurora, Ontario).

Dr. CHARLES LIEBMAN read "Clinical Notes on the Early Course of Cancer of the Cervix Uteri." After quoting the opinions of many eminent authors, he narrated the particulars of four cases observed by himself, in which he showed that the disease generally spreads much higher on the lining membrane of the cervical cavity than on the exterior part of the neck. Amputation of the neck he considered useless in all cases of cancer except those of pedunculated cancroid papillary tumours of the cervix.—Dr. WILTSHIRE thought the "beginnings of cancer" of singular importance to the profession as a matter of clinical as well as of pathological interest. It involved an important practical point; for it was obvious that if we could find out the beginning of the disease, and were thus enabled to treat early the implicated tissues, we might at least have the satisfaction of arresting the disease, and that sometimes for a considerable period. Dr. Wiltshire mentioned two cases in illustration of his remarks. In both considerable benefit followed removal of such portions of the diseased tissues as could readily be attained. He had sometimes used chromic acid with considerable success.—Dr. HEYWOOD SMITH remarked on the far greater frequency of cancer in the lips of the uterus than the fundus or body. He had tried Dr. Gibb's method of treatment, with plugs of strong perchloride of iron, and in a large proportion had seen, with some arrest of discharge, grave symptoms supervene—symptoms as of septicæmia. He laid stress on the rule that Dr. Barnes had insisted on—viz, that in all cases, when practicable, early removal should be had recourse to.—The PRESIDENT remarked that Dr. Liebman had drawn attention to an interesting pathological subject. The object of his paper was to point out that authorities generally regarded the vaginal portion of the cervix as the seat of the beginnings of cancer, whatever its form might be; but that he had observed cases in which the disease commenced in the cervical cavity, and he had been able to demonstrate the development of masses of epithelioma in that locality, while the external labia were entirely unaffected. The author, however, did not seem to be conversant with the researches of Virchow and other pathologists who had observed cancer originating both in the mucous membrane of the cervix and body of the womb, and had demonstrated the development of cancroid in the uterine walls themselves. Cancer beginning first in the fundus uteri was not uncommon. Sir James Simpson had written a paper on the subject, and he believed instances had been published by Dr. Barnes and others. He had in recollection more than one case where he had watched the progress of malignant disease in the body and fundus of the uterus, and where ulceration had made its way into the peritoneal cavity, with the cervix, to all appearance, scarcely at all involved. The difficulty of diagnosis in cases of cancer of the interior of the uterus was no doubt very great, and he knew no way of distinguishing a malignant growth situated in the fundus from the enlargement of a benign character except by observing the nature of the discharges, the comparatively rapid growth, and the persistent pain associated with the former. In the treatment of epithelioma or other malignant disease of the cervix, he believed there was a general concurrence of opinion that when the tumour had a margin of healthy tissue above, it was desirable to amputate the cervix; but he had not yet made up his mind whether in worse cases—namely, where the disease had advanced above the line of demarcation between the cervix and body of the uterus, and it was not possible to remove the whole of the morbid growth—it was desirable by operative procedure to remove a considerable portion by way of staying the progress and lessening the discharges. He thought this might be justifiable where the discharges and loss of blood were great and rapidly reducing the patient, but where the symptoms were less urgent his experience rather indicated abstinence from interference, as any but palliative measures had seemed to give an impetus to progress and to lead to more rapid development of the disease.—Dr. ROGERS thought the paper was useful to the Society if only to elicit the opinion of the fellows. He considered it impossible to cure cancer by means of escharoties, though of these bromine was the most useful. If the tissue be scraped first and destroyed effectually by means of bromine, it often produced an amount of benefit that warranted our doing it; but it required great care, as it was a powerful escharotic.—Dr. BARNES, not having heard the paper, would limit his observations to one question of treatment referred to by the President. After the experience of quite a considerable number of operations, he had arrived at the conclusion that the most effective as well as the most safe mode of dealing with cancer of the cervix uteri was by the galvanic cautery. If the diseased mass was projected into the vagina in such a manner as to permit of being surrounded by a wire, it should be removed flush with the vaginal roof. There was rarely any serious bleeding, sometimes almost none; now and then, if a small artery spouted, the use of the porcelain cautery of the battery had effectually stopped it. In those cases in which the disorder did not form a projecting mass the button galvanic cautery could be moved over the surface, destroying the necrosed portion. Comparatively healthy granulations commonly followed. The so-called cachexia disappeared for a time; there was almost always freedom from hæmorrhage for a time, and the general condition greatly improved. He had only known one casualty from the proceeding—a woman in St. Thomas's Hospital died a few days after operation from peritonitis. In all the other cases reprieve and benefit were experienced. In one case the subject had two pregnancies, and she was alive five years after operation, although the disease returned.—Dr. WYNN WILLIAMS remarked that the cancerous matter may be deposited in any of the tissues of the uterus as in other parts of the body; also that different forms of cancer begin more frequently in one structure than in another. Thus the epithelial form commences in the skin and mucous membranes, whereas the medullary commences in the deeper-seated parts. So it is with the uterus: we may have cancerous deposit in any part of the uterine organs. He had seen in consultation three cases within the last twelve months where he diagnosed cancer of the fundus. He did not think that anyone could well mistake the peculiar odour of a cancerous mass in its later stages for the odour of a disintegrating fibroid. In cancer of the fundus the greatest care should be taken in passing the sound, as a very eminent physician told him that on one occasion whilst examining the uterus he was unfortunate enough to pass the sound through the cancerous tissues into the peritoneum, the patient dying in a few hours of peritonitis. There can be no doubt that the cancerous mass, wherever situated, should be removed when practicable, either by the écraseur or by the galvanic cautery, as mentioned by Dr. Barnes; and even if the whole of the mass be not removed, if the uterus be mobile and the surrounding tissues not infiltrated we should endeavour to destroy the remaining portion by injecting bromine into it, or applying it by means of cotton-wool. This he had done in several instances where the neck of the uterus had been removed, and the actual cautery

applied by other medical men, with the result apparently of removing the whole of the disease, for after a lapse of six or seven years the disease had not reappeared.—Dr. ROUTH said the Society might recollect his bringing the subject of uterine cancer forward several years ago, and subsequent experience only confirmed the opinions then expressed; indeed one of those women, a case then believed to be hopeless, was, he had heard, still alive and in perfect health. He did not believe that cancer of the fundus was quite so rare as had been stated; occasionally it was overlooked, and mistaken for fibroid; indeed it was quite impossible in many cases to make a diagnosis, because the bloody or fetid discharges were common to cancer and disorganising fibroids, or might occur independently of these; but if there was marked pain at night, which persisted for any length of time, with menorrhagia, it was safe to put down the case as one of cancer. Perhaps some very rare forms of neuralgic uterus with menorrhagia might puzzle us occasionally, but the previous history generally cleared up the case. When the cancer affected the cervix exclusively, and always in cases of papillary or epitheliomatous cancer, it was the right thing to remove it at once. He had done so in several cases, and many had had no recurrence. He usually employed the ordinary wire écraseur in preference to the electric cautery, as it was much more easy of application, especially if the tumour was large or irregular, because the electric wire was so thin. Then, again, the electric wire often burnt a good way around the burning wire, and if the cervix had to be taken away high up there was fear of injuring the attachment of the vagina and uterus, and so getting into Douglas's space from the after-sloughing, and producing death by peritonitis. He was not satisfied with leaving the case to heal at will after such excision. He waited four or five days, and then destroyed the surface again by means of bromine or the actual cautery, allowing the destruction to extend to part of the lining membrane of the uterus if he had reason to fear it was diseased at all; and then he had often expedited the healing process by a solution of gastric juice, which had a remarkable effect in bringing about cicatrisation. This he had proved often, not only in cancerous sores, but in others which turned out very obstinate and difficult of cure by other means. The marked difference between it and the perchloride of iron in healing power could be seen often if we dressed a wound half with the iron and half with gastric juice. and he was glad to find that Dr. Barnes confirmed the healing power of this agent. A relapse would not justify cessation from further interference. A second operation often proved effective where the first had failed. Lastly, in cases of hopeless cancer, accompanied by fetor and loss of blood, and when a patient was dying a miserable death, he thought we should interfere. Destruction of the ulcerating surface often both stopped the general cachexia and gave great relief, and the patient gained temporary restoration of health. Where the hæmorrhage proceeded from the cavity he applied the persulphate solution of iron or the perchloride directly to the cavity on lint; and more recently, by means of an instrument similar to that devised by Simpson for passing caustic into the womb, though larger, he introduced into the cavity, either after dilatation by sea tangle, or without if the opening was sufficiently patent, the dry solid perchloride, with the best results. Sometimes the arrest of hæmorrhage was instantaneous, and seldom gave rise to any trouble. Once only he had seen some metritis, which supervened and lasted three or four days. In any case he thought it was perfectly unjustifiable to leave even hopeless cases of uterine cancer to die a miserable death, and be a pest to themselves and others, in our present state of knowledge, when so much temporary relief could be given.—Dr. AVELING stated that after scooping or removing by any other means the cancerous structures, he had found nitric acid as efficacious and more easily applied than the actual cautery.—Dr. WILTSHIRE said he had used chromic acid with great benefit; it acted as a deodorant as well.—Dr. BLOXAM said that all present would agree that it was of the utmost importance, in those cases which were beyond the reach of operation, to mitigate the suffering caused to patient and friends by the extremely fetid discharges. He had heard bromine named, but not iodine or iodoform. The last was both a deodorant and an anodyne, and deserved more notice than it had yet received in this country. It could be applied in powder or wool, as a pessary with cocoa-butter, or in solution in glycerine.—Dr. EDIS remarked that the object of Dr. Liebman's paper was to show that in the majority of cases of cancer of the uterus the disease commenced in the lining membrane of the cervix, and not primarily in the lower portion of the cervix itself. He (Dr. Edis) had long recognised the fact, and in place of amputating the cervix by means of the écraseur or galvano-caustic, he had been in the habit of employing the actual cautery in the form of a pear-shaped bulb, to destroy the lining membrane and interior of the cervix, thus producing a conical cavity, the base representing the os uteri, which ultimately contracted, leaving merely a small aperture. In several instances this had been attended by marked success, the patients living for many years after the date of operation without any apparent return of the disease. The chief points enabling us to arrive at a correct diagnosis as regards the fact of its being cancer were the almost undilatable condition of the cervix, the extreme tendency to bleed on the slightest touch, the fixidity of the cervical mucous membrane, and the rapidity with which the disease extended.—Dr. J. BRAXTON HICKS said, with regard to the deep burning of the galvanic wire mentioned by Dr. Routh, this was obviated by making the battery more powerful and screwing up the wire more quickly. The galvanic wire had one great advantage over the ordinary écraseur—it cut quite clean and knife-like, and was adaptable to the more sessile growths, whereas the écraseur drew in and puckered up such forms and brought away the softer portions, gliding off the harder, which it left behind. This he had seen frequently. With regard to the practice advocated by most of the speakers—viz., removing those parts which we could, and destroying the rest by cautery, caustics, or styptics, or other plan,—he coincided; indeed, these he had advocated in papers elsewhere or at this Society. It afforded much benefit and comfort to the patient, removing the cachexia very effectually till the return of the disease. This he had shown in a paper in the Guy's Hospital Reports some years since, and concluded that the so-called malignant cachexia was owing, not to the malignant diathesis, but to the absorption of the material from the malignant growth prior to the existence of sloughing. Regarding the place of origin of malignant disease, he considered, as the result of observation, that it could spring from any tissue in the uterus, and then spread to other tissues; that each fresh tissue affected would take on the action more according to its own nature than of that from which it was influenced. This opened up the question as to the nature of malignant disease at large, which was too wide a subject for the present time, but he would say that he had seen on the confines of malignant disease of the cervix removed by amputation, under the microscope, the mode of extension taking place in the nuclei of the fibre cell, enlarging, then dividing inside the old cell, bulging out its centre. In like manner, as he had pointed out in the Guy's Reports, and again in the Pathological Transactions, he had seen the nucleus in the wall of the bloodvessels enlarge, and then divide into two or three cells bulging into the canal of the bloodvessel, giving it a bead-like appearance, but ultimately going on so far as to obstruct the current completely; and this would serve to explain why it was that sloughing so readily occurred in some of these growths.—Dr. MURRAY quite agreed with the President as to the difficulty of diagnosis in cases of cancer of the fundus uteri, and fibroid disease of the body of the uterus. He had lately seen a case where not until after death was it shown that true cancer of the fundus uteri existed, and death resulted from perforation of the uterine walls, with hæmorrhage into the peritoneal cavity. During life none of the symptoms present more especially belonged to either cancer or fibroid disease.

Dr. CLEMENT GODSON communicated, for Dr. CHAS. J. SAVORY, the particulars of an interesting case of Epithelioma of the Cervix Uteri complicated with Pregnancy; removal of diseased portion; subsequent delivery of a healthy child; recurring pregnancy. J. W——, aged thirty-five, married sixteen years, eight children. Had a sanguineous, and at times watery, discharge, offensive in character. A large cauliflower excrescence was detected and removed by the écraseur on October 27th, 1870. On January 12th, 1871, she was delivered of a female living child, both doing well. On June 25th, 1873, she was again taken in labour, and after some little difficulty, turning was

accomplished, and a dead child extracted, no undue hæmorrhage occurring. Patient succumbed thirteen days after, apparently from sheer exhaustion, two years and nine months from the date of first operation. Dr. Godson remembered the case well. The enlargement of the uterus was attributed to the disease supervening so immediately on parturition. Pregnancy being overlooked, the patient was perhaps spared the perils attending Cæsarean section. The case showed how much might be done to the uterus and its appendages during pregnancy without abortion taking place.—The PRESIDENT asked whether the question of making incisions in the cervix to facilitate the expulsion of the child had been proposed in place of Cæsarean section?—Dr. MURRAY remarked that a practical point of great interest was that, even if pregnancy be diagnosed, there would be no harm in removing the mass.—Dr. J. BRAXTON HICKS remarked on the importance of having some rules for the management of cases of pregnancy in malignant disease of the cervix. He thought it, however, almost impossible to obtain any. Each case must be judged of by itself. However, in considering whether we should induce labour or leave the case for Cæsarean section at full time, a primary question would arise, Can the woman live till full time? Again, in determining the question in regard to the induction of labour, Is the disease limited to the os and lower cervix, or does it extend to the lower part of the body of the uterus in such a way as to render delivery very difficult? If these are difficult, a third may arise: Can we leave the induction to the viability of the child, or must we procure abortion? So much depended on the amount and position of the disease and the state of the patient that Dr. Hicks feared it would be difficult to lay down definite rules. He instanced some of the cases which he had seen.—Dr. HEYWOOD SMITH thought it fortunate delivery did not happen soon after the operation, for he was sure that the puerperal state was a very great element of additional danger. He had a similar case some three years ago. Labour set in about the fifth month; delivery was effected by podalic version, and the child born alive. Removal of the malignant disease of the cervix was effected by means of the écraseur, the tissue cut through being apparently healthy. The patient, however, died on the fifth day. The better practice would have been to have postponed the operation until the puerperal state had been recovered from.—The PRESIDENT thought one of the most interesting points in the paper was that the operation was performed without bringing on labour. It was generally supposed that no operation should be performed during pregnancy, even removing a tooth; but this case proved otherwise.

Mr. Spencer Wells at the next meeting will introduce the subject for the evening's discussion, "The Relation of Puerperal Fever to Infectious Diseases and Pyæmia."

THE COLLEGE OF PHYSICIANS.

ON Monday last, at an unusually large meeting of the College of Physicians, Sir George Burrows was elected to the Presidential chair of the College for the fifth time. We congratulate the recipient of the honour upon this additional mark of the confidence reposed in him by the College, an honour, moreover, which is well merited. Following the precedent set by Sir Thomas Watson, the President delivered an address in which he reviewed the principal events of interest connected with the work of the College during the past year. Passing in review in some detail the steps which the representatives of the College have taken in connexion with those of the other licensing bodies to frame a scheme for the formation of a Conjoint Board, the President pointed out the many difficulties which had already been overcome to bring about conjoint action, but only to be met by what seems at the present time to be a complete bar to the successful working of the projected scheme. First one body, then another, would seem to have discovered that it had exceeded its power, or was unable to act, and then to have obtained what was necessary to enable it to co-operate by Act of Parliament; but at the eleventh hour the terms of the charter of the College of Surgeons have been legally interpreted as preventing that body from giving effect to its wishes, and without the co-operation of the College of Surgeons the Conjoint Board must necessarily be a failure. Sir George Burrows pointed out, what must be clear enough to everyone, that, as matters now stand, a ready solution of the difficulty lies in the Government of the day taking the matter into its own hands and securing the one-portal system by its own legislation. This of course is a desideratum for which we have always contended. In referring to the action of the College in the matter of the formation of a Conjoint Board, the President more than once spoke of the approval which the College of Physicians accorded to the arrangements connected with the scheme suggested by the Committee of Reference. Now we take leave to deny that the College of Physicians ever deliberately gave its sanction to these arrangements or recommendations; indeed, the College has never had a fair opportunity of discussing the scheme in its several features, though a promise was distinctly made that such an opportunity should be forthcoming. The reports of the proceedings of the College meetings during the last year will supply the proof of this assertion. The officials of the College opposed all discussion, and the fellows were given to understand, if not in so many words, at least by sufficiently intelligible indications, that the scheme might be jeopardised by discussion, and the question of details connected with the scheme must be left to the Committee of Reference. The College, in fact, was bound by its representatives, and, we repeat, was never given an opportunity of fairly discussing the details of the Conjoint Scheme. Sir George Burrows dealt with another very important topic, that of physicians' fees, and his remarks were elicited by a reference to a document relative to a tariff of fees presented, with certain requests, to the College during the year, by the Shropshire Branch of the British Medical Association. Everyone knows that, whilst most circumstances affecting the cost of living and the education of the physician have altered very considerably during recent years, the conventional fee has remained the same, although its absolute value has much diminished. The time has come when the profession may fairly consider, as a body, whether some steps should not be taken to secure to itself, at least in certain particulars, a more equitable acknowledgment of its services, especially when they are given away from home. The first step may most fitly be taken by the College of Physicians, and Sir George Burrows invited the fellows to offer him suggestions, and added that he would take measures for calling a general meeting, if this seemed desirable hereafter. Of one thing we are certain—that any decided general improvement in the matter under notice, affecting the great bulk of the profession, will be likely to be brought about in proportion as the heads of the profession set an example in securing for themselves a just appreciation of their services. We regard the conduct of the College on this subject, therefore, with additional concern, on account of the indirect influence which it will exert upon the non-consultant body of medical men. The President, with commendable propriety, spoke very plainly on the subject, and there could not be a doubt that his observations were fully approved by the body of fellows who were present. Of course, in every large gathering of men there is sure to be some one particular person whose sentiments are thoroughly out of tune with the rest of his companions, and in the present instance Dr. Lionel Beale expressed himself as quite satisfied with the present scale of actual fees. The only other point of difference referred to the proposition that the address should be published. It was deemed by some unadvisable that the President should enter into any great detail until the College had had an opportunity of fully discussing the question.

THE LANCET.

LONDON: SATURDAY, MARCH 27, 1875.

IF the arguments in favour of the distinctness of croup from diphtheria received, as some of our correspondents seem to think, scant justice at our hands, the defect has been compensated in the letters which we have published from Drs. WILKS, MOXON, MONCKTON, and others, who consider that there is at least too much evidence in favour of the distinctness of the two diseases to justify, in the present state of our knowledge, a definite conclusion that they are identical. The letters of Dr. JOHNSON and Dr. SEMPLE have, on the other hand, very clearly restated the grounds on a review of which on a previous occasion, without any assumption of authority, we considered that the separation of the two diseases could no longer be maintained.

It is very doubtful how far the historical argument, on which much stress has been laid by Dr. MONCKTON and Mr. TAYLOR, can be accepted as significant. The comparison is not between a croup of the past and a diphtheria of the present, but between croup and diphtheria as they exist at the present day. That diphtheria, as ordinarily recognised, occurred in the past, the cases recorded by HOME and CHEYNE leave, as Dr. JOHNSON and Dr. SEMPLE pointed out, little room for doubt. Its frequency must remain undetermined. It is often hard to believe that that which was unnoticed was not non-existent. Doubtless, epidemics of the disease were rare then, as they are rare now; but all analogy is in favour of the occasional occurrence of sporadic cases before the disease was generally recognised, just as sporadic cases, spreading or not, occur in the present day in places where, and at times when, the disease is rarely seen. Memory is a fallacious guide, and the fact that no distinction has, in the past, been made, by the bulk of the profession, between membranous and simple tracheal inflammation, lessens greatly the value of individual recollection as satisfactory evidence for the comparison of facts.

The absence of anatomical distinction between the false membrane in the two diseases receives ample confirmation from the experience of Drs. WILKS and MOXON. The importance of this identity may, we admit, easily be overestimated. In this as in so many other cases apparent identity of effect is not necessarily evidence of identity of cause. But it has at least a negative value which must not be ignored, and may fairly render more severe our scrutiny of other alleged distinctions. It is upon the etiology and clinical history of the two diseases that the question of their relationship must turn.

A mechanical or chemical irritant, it has been pointed out, may cause a false membrane in the larynx. It is said that therefore a false membrane may be a purely local production, unattended by primary constitutional mischief, and is no evidence of a specific disease. But the extreme rarity of cases in which a mechanical irritant causes a false membrane lessens surely their significance. That they are rare is obvious from the fact, which we may safely infer, that they are unknown to pathologists of the experience of Sir WILLIAM JENNER, Dr. JOHNSON, and Dr. PAYNE. The rare exception only renders more distinct the law from which it differs. If false membrane were a common result of such irritants as an impacted bean or a decayed tooth, the cases of Dr. WILKS and Dr. MONCKTON would be of great importance. But the inflammation commonly produced by such an irritant is simple, muco-purulent, and not membranous. A false membrane so resulting must be one of two things: it must be either, as has been suggested, a simple slough of tissue destroyed by the necrotic action of the irritant; or it is the result of a peculiarity in the character of the inflammation, which must depend on something else than the ordinary reaction of healthy tissue. The instances in which the irritant causing the inflammation is so powerful that it may not improbably have produced a necrosis of the superficial layer of the mucous membrane, have not a sufficiently clear bearing on the question at issue to need consideration. Whatever may be the conclusion respecting croup and diphtheria, it will appear to most persons probable that the false membrane found in parts to which scalding or highly irritant liquid or vapour has been applied was produced by its direct action; and we must, therefore, put on one side cases of this description.

To assert that a disease cannot be diphtheria because its origin from diphtheritic contagion cannot be traced, is to assume that diphtheria must always own as its one cause a specific diphtheritic poison pre-existing as such. This, with regard to true diphtheria, is unproved by observation, and is rendered improbable by the considerations which Sir WILLIAM JENNER urged so forcibly on the members of the Clinical Society in his inaugural address. Diphtheria belongs, with erysipelas and typhoid fever, to the class of diseases which have, commonly, as apparent cause, influences which are not of the same specific character on the resulting disease. They may be the same, but the only proof that they are is that furnished by their analogy to other specific diseases which differ from them in some essential qualities.

We have testimony to the fact that cases of diphtheria may occur, proved to be such by symptoms and contagious character, malignant as well as mild, killing by blood-poisoning as well as by suffocation, having as sequelæ paralytic phenomena, for which no exciting cause can be traced, except some exposure to cold when an individual is for some reason "out of health." Of course the preceding unhealthy condition may be the result of a specific poison; but of this there is at present, in many of the cases to which we are referring, no distinct evidence. If, then, cases of unquestionable, contagious diphtheria arise, having no more discernible cause than exposure to a simple irritant when the system is in a predisposed condition, the fact that the so-called simple membranous croup arises in the same way cannot but be regarded as additional evidence of the identity of the two diseases. We do not deny that there may be in each case a definite poison or poisons in operation; all we suggest is that the circumstances of the origin of the

two affections furnish no uniform grounds for specific distinction.

The question of difference must therefore turn on the clinical characters of the maladies. The milder course of croup and propagation of diphtheria by contagion are the points chiefly relied upon in the letters which have appeared in our columns.

Croup, it is said, kills only by suffocation. It is dangerous only because of the accident of its position; whereas diphtheria often proves fatal by direct blood-poisoning. Membranous inflammation of the larynx, spreading by contagion, is diphtheria; occurring in a child and not spreading, it is croup. Membranous inflammation involving the pharynx is considered by most authorities to be diphtheritic, but it appears also to be regarded as croup by Dr. MOXON, if it occurs in a child, begins in the larynx, kills by suffocation, and does not spread by contagion.

But is such a division recognised in the case of any other disease of analogous position in the scale of specific diseases? Is typhoid fever regarded as two varieties according as the general or local symptoms predominate, or a contagious influence is manifested? Is erysipelas, as seen in our medical wards, regarded as a different disease if it begins after exposure to cold, and if it begins by contagion—if it runs a mild course with moderate constitutional disturbance, and if it kills rapidly by septicæmia? Dr. MONCKTON, indeed, hints that several distinct diseases may lurk under the common name, but at present no evidence in favour of such an opinion as regards "medical" erysipelas has been forthcoming.

Contagion, where the degree of contagiousness is low, must always be a test of distinction dubious in value and difficult to apply. The poison of diphtheria seems to need almost mechanical contact for its effective transfer. There are many cases on record in which the mechanical transfer of secretion from one person to another has been followed by intense diphtheritic poisoning. It is by no means certain that the sequence is invariable. The case in which Dr. MOXON brought the secretion in contact with his own mucous membrane may have been a case of membranous inflammation, and, if so, would be of great importance; but, as Dr. SEMPLE shows, the fact does not appear from his account.

Careful clinical investigation, checked by pathological results, may throw much light upon the moot question. Meanwhile it is probable that our readers have for the present had enough of the discussion, which has not, we think, been uninstructive. The question seems little likely to be decided by further argument. Still less, however, is it to be put at rest by explaining a different opinion by an imputation of biased judgment or of an "enthusiasm of authority," for which imputation we can see no justification.

THE forthcoming discussion at the Pathological Society will, we doubt not, be equal in interest and in variety of opinion, eloquently expressed, to any of its predecessors. The subject chosen—the Germ Theory of Disease—is one of such widespread interest, and one which in its bearings on our knowledge of morbid processes in general is of such importance, that we may expect all scientific men, whether biologists or practical surgeons and physicians, to be equally interested in it. It is not too much to say that the germ theory, in its widest sense, may be made to include the etiology, pathology, prevention, and treatment of a large proportion of all known diseases; whilst it includes questions necessitating an intimate acquaintance with chemistry and botany, as well as life and vital action. The subject, in fact, is one so far-reaching, and capable of such diversity of treatment, that we cannot but wonder that, in the present state of our knowledge, it should have been chosen for discussion. The experience of past debates has abundantly demonstrated the necessity for some clear understanding of the objects of the discussion, and of the terms employed; and without in any way wishing to anticipate the debate, we may venture to point out some of the questions which will be involved. It would not be difficult to do more than this, and to go over a good deal of the ground which will be taken up—that is, so far as ascertained facts are concerned, and even with regard to the views of some of the principal speakers. Indeed, notwithstanding the amount of attention which has been devoted to the subject, the facts at present known are not at all proportioned to the existing theories; and we are inclined to agree with the opinion expressed by Dr. SANDERSON eighteen months ago with regard to one part of the subject—that the observations relating to the part played by bacteria in the production of disease are not yet sufficiently connected to be readily summed up. And when, in addition to bacteria, we come to the still wider question of the relation of allied organisms to other infectious diseases, the subject is widened so indefinitely as to be removed to a great extent from the sphere of observation to that of speculation and theory. It is true that there exist certain positive observations on the occurrence of definite organic forms in relation with certain diseases—such, for example, as those of OBERMEIER, in relapsing fever, and of KLEIN in sheep-pox and typhoid, not to mention the as yet unconfirmed observations of NASSILLOFF, LETZERICH, and others on diphtheria, and some still more doubtful ones on the *milzbrand* of cattle. If we add the recent careful observations of LEWIS and CUNNINGHAM on the apparent absence of organisms in the poison of cholera, we have almost exhausted the real work on this part of the subject. Nor can anyone who has read the able and careful report of the two latter gentlemen help feeling how scanty is our positive knowledge, and how many fallacies of observation and interpretation are possible. And if we limit our view to the relation of bacteria to pyæmia and septicæmia, on which we have rather more definite knowledge, we still find a wide gap yet needing to be filled up ere our knowledge is complete. The observations of LISTER, COHN, BILLROTH, KLEBS, and others have thrown much light on the natural history and mode of growth of these organisms; and the more recent important work of KÜHNE and BURDON-SANDERSON on their origin and relation to septic conditions promises to lead to some more precise idea of their influence in producing disease than we have as yet attained.

From the outline of Dr. BASTIAN'S paper, it is evident that all these and some other points, especially with reference to the theory of fermentation, will be brought forward

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and to some extent discussed; and we may infer that the line of argument taken by him will be essentially similar to that of an able opening address on the subject delivered at University College four years ago, modified perhaps by the more recent researches by himself and others. We may anticipate also that the rival views on the germ theory will be set forth and discussed in the clear and able manner of which Dr. BASTIAN is a master. It will be difficult indeed, when discussing the position of bacteria in the rank of life, and the subject of their mode of origin in the body, to avoid the question of their possible origin *de novo*. Nor should we be surprised if this were, in reality, to prove the main subject of debate, however carefully Dr. BASTIAN may endeavour to keep it in the background, should he wish to do so. The opportunity of attacking his views and experiments on this subject will, we fear, prove too great a temptation for some of his scientific opponents, although we trust they will not yield to it. But if the question of the nature and origin of bacteria be decided—whether they develop from latent germs pre-existing in the body, or are conveyed into it from without either as germs or developed organisms—or whether, as Dr. BASTIAN considers, they are the result of a degeneration of or heterogenesis from the bioplasm of the tissues,—there yet remains the question of their *rôle* in the production of disease. Are they essential or accidental in the process of infection, if they be of constant occurrence? On all these points we may expect that the known facts will be collated and the existing theories ventilated by a thorough discussion. And the question remains whether we shall be any the wiser for it. In point of fact, almost any hypothesis may be maintained at the present time with a sufficient show of reason, seeing that the majority of the arguments in favour of it must be in the main theoretical, the ascertained facts being so few and as yet unconnected.

Yet it is not perhaps too much to hope that, if scientific knowledge is not advanced, it may be diffused by the clear statement and discussion of the work already done; and it is possible that it may reveal more clearly the direction to be taken by future work and the fallacies to be avoided. But it would be matter for regret if any theory should be accepted as final, or as of any value except as an incentive to observation. Nothing could be more unscientific, or less calculated to advance the search after truth, than the way in which some of the work on this subject has been done, with the object apparently of maintaining a theory rather than of ascertaining facts. The more facts and the less theory we have in the debate, the greater will be its contribution to the advance of pathology.

THERE are several aspects from which the organisation of the Army Medical Service might be regarded; but let us take three: the social, or that which almost exclusively affects the medical officer himself; the medical or professional, which concerns both the medical officer and the sick soldier; and what may be termed the administrative, or that aspect which regards the service in relation to its own intrinsic efficiency and to its adjustment in working harmony with other branches of the service.

Dr. HAMILTON has shown great public spirit in taking up the cause, as well as ability in discussing the grievances, of medical officers. We are, however, only now concerned with that part of his pamphlet in which he deals with the question of organisation. With every desire to form an impartial opinion, he has, nevertheless, been almost entirely dependent on information derived from former pupils and medical officers; and it is no part of his business to supply explanations which would alter the complexion of a fact telling for his side, or to endeavour to put himself in the position of those he wished to convince so as to see the subject as they view it. The key-note, as we take it, is sounded at page 2 of the pamphlet, wherein he says that, by the breaking up of the regimental system, "the Medical Service of the army has been deprived of its greatest attraction." It is highly probable that many young medical men, in embracing the army in preference to civil life, have been influenced by an attraction of this kind; and it is fair to suppose that, as Irishmen enter so largely into the composition of the service, the loss is keenly realised and resented by them. A regimental medical officer felt that he shared in the traditions of his corps, in the hospitality extended to its officers, and in the social advantages connected with its mess, and so on. But we contend, on the authority of communications that have reached us for years past, that the position of the surgeon of a regiment was just what his personal qualities, and not what his rank or professional standing, made it; and it was a frequent source of irritation and complaint that this was so. The relative rank conceded to the medical officer by the Warrant of 1858 rankled in the minds of combatant officers; and regimental medical officers found themselves subjected to heavy subscriptions, which in the aggregate would, if capitalised, often have amounted to a considerable sum, for what was a doubtful position, in which they did not, after all, reap the advantages of their relative rank. The question comes whether it is to the advantage and happiness of medical officers to shine by a reflected light, and seek a kind of social support from their regimental connexion. It may be that there are some who hold, what they will not openly avow, that the medical profession in the army cannot be trusted to stand alone; to which all that can be said is that it will never be respected until it does. Any support is welcome, no doubt—to borrow a simple illustration,—to a man in the water who has no confidence in his own powers; but his chances of becoming a swimmer are small so long as he leans on any extraneous support. It is of unquestionable advantage that a man should possess qualities which would socially distinguish him, and that he should be able to enjoy and develop them in a congenial sphere; but, after all, the primary object of the State is to get good doctors, and to encourage them in being interested in their work as such. For whose benefit did the regimental system exist? Was it for the benefit of the doctors, or for that of the men? If for that of the men, the issue is narrowed to this point,—Was the regimental system, as the writer of the pamphlet notes in the next paragraph it was alleged to be, "inefficient and extravagant," or was it the reverse?

Let us see what can be said for the regimental system. In the first place, it fitted well into the scheme of home life in a regiment; in the time of sickness, the soldier through

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it avoided the breaking of familiar associations, just at the time he was most dependent on the kindness and sympathy of his every-day companions: this is the sentimental side of the question, but not its weakest one. Then it was a simple system, easily understood, readily applied. As administered in our army, it *seemed* to be a cheap system, just as it would be cheaper in appearance to lodge the sick member of a family in a spare room, rather than to send him to a proper hospital. Then it was at hand, accessible; saved the necessity of seeking transport for the sick soldier; and in its operation the *amour propre* of the commanding officer was preserved—no one came between him and his soldier. No doubt other things might be mentioned, but most of them would group under one or other of the heads already specified.

What can be said against the regimental system? This, in the first place: that under it the medical officer's sphere of practice was too limited to afford him that interest and experience in his profession which were requisite for the development of his powers; it took away the great incentive to exertion arising out of a competition with and a desire for the good opinion of his coadjutors; and it afforded no other opportunity of estimating the qualities of an able and skilful, but unobtrusive, man, than could be gleaned from the correctness of his official returns, the neatness of his hospital, and the absence of adverse reports. No information as to the characters, tastes, or capacities of respective officers could be obtained, although such information is essential if the right man is to be put in the right place in time of war. It can scarcely be maintained that regimental hospitals have been, or that they now are, suitably equipped places for the best lodging and care of sick people; that they have possessed the adjuncts provided in civil hospitals; or that the allotment of a certain amount of hospital space to each regiment at a station where there are several regiments, the maintenance of a separate staff, with separate hospital *matériel*, in the shape of medicine chests and surgical appliances, to be moved about from place to place, was an economical or efficient method of administration. How uncomfortable it often was to the sick, and what trouble it caused to the medical *personnel*, when a regiment changed its station, are pretty well known. If such be the state of things in a time of peace, what must it be in time of war? But it has been said by some—Why not legislate for the rule, which is peace, and not for an exceptional condition like that of war? It seems scarcely necessary to reply to this; but ABRAHAM LINCOLN's aphorism about "not swapping saddles in crossing a stream" points the reply. It is a delusion to suppose that by any practical organisation we can adequately provide for all the requirements of the sick and wounded after a battle or a series of battles; but there is a right way and a wrong in this as in most other matters, and it is too late to set about finding out the right way when we should be applying it. It is excessively difficult to regulate the amount of equipment, transport, and *matériel* required by an army in the field with any regard to economy and efficiency, but on the regimental basis it would be simply impracticable. What would be thought of the adoption of an arrangement, as Dr. GRANT has well put it, in our city hospitals, by which one set of wards were exclusively appropriated to one street or district and another to another, with separate fuel and light, doctors, and sick attendants? And, to carry out the parallel, we must suppose that the inhabitants of each street or district formed a moving population, the sick of which had to occupy the ward vacated in another hospital of another place, the previous occupants of which took all their medical and surgical appliances away with them, and only left such of their sick as were unfit to travel. Of course it will be urged that there is no real comparison between a regiment and the people of a street, the former being subject to a common discipline and internal economy, which the latter are not; but we cannot see that this need remove the force of the comparison. The highest good for a sick man is to get well quickly. If it can be affirmed that this is better effected in a "scratch" hospital, under the attendance of a surgeon with limited experience, than in a good hospital, furnished with all appliances for the aid of the sick, and attended by a surgeon of greater experience, then let the regimental hospital system be continued; but, before coming to this final determination, let it be borne in mind that all other nations have arrived at a different conclusion.

We hope in a concluding article to add a few more comments and criticisms, to gather up the principal points that have been already urged, and to indicate what, in our opinion, might have been, and not what is, the organisation of the Army Medical Department.

IN THE LANCET of the 13th inst. we devoted a special article to the consideration of the sanitary laws relating to seamen, ships, and emigrants, as set forth in a Digest of the Merchant Shipping Acts recently published by the Board of Trade. It was shown therein that the clauses of those Acts relating to antiscorbutics, accommodation of crews, and most of the arrangements connected with the emigration service, were working well; but that those referring to the medical inspection of seamen and the examination of medicines were ignored, and that the inspection of emigrants was carried out in an unsatisfactory manner. Since this article was published, the new Public Health Bill has appeared; and an examination of its clauses shows that, as regards the organisation of Port Sanitary Authorities, the Bill is simply a copy of the Public Health Act of 1872. So that if this Bill becomes law, in its present form, it is to be presumed that, as now, the provisional orders constituting Port Sanitary Authorities will make the latter responsible for carrying out the provisions of the various Nuisances Removal and Sanitary Acts "in regard to ships and waters, and persons engaged therein, and in regard to providing hospitals or temporary places for the reception of the sick." Ships, in fact, are treated as houses; and, if the Port Sanitary Authority does its duty, all vessels moored within the district should be visited from time to time by inspectors to see that the crew spaces are sufficient and properly ventilated, that foul cargoes are removed, that the water-supply is good and sufficient, and that cases of infectious or contagious disease are sent to hospital, the vessel fumigated, and the clothing disinfected. In the matter of crew spaces it would appear that the provisions of the Public Health Bill are likely to clash with Clause 231 of the Merchant Shipping Code, as two authorities

seem to have been set to do one piece of work. The officers of the Board of Trade measure crew spaces, in the first instance, when the ship is surveyed, and decide the number of berths in this or that deck house or forecastle accordingly; but take no means to ascertain (either continously or from time to time) whether the regulations prescribed are duly carried out. Is the staff of the Port Sanitary Authority to supply this omission?—and, if breaches of the law are discovered, is the Port Authority bound to report such offences to the Board of Trade or not? Again, as regards school-ships and training-ships, Clause 103 of the Public Health Bill specially exempts from all sanitary provisions "any ship or vessel belonging to Her Majesty." All school-ships moored in the Thames, the Mersey, and elsewhere are merely lent by the Admiralty for civil purposes; and it is eminently necessary that this clause should be altered so as to give the Sanitary Authority legal right of entry in case of the existence of any epidemic, to prevent overcrowding, and for various other purposes in connexion with ordinary sanitary duties afloat.

It seems also that the relations between the Port Sanitary Authority and the Board of Trade as regards the conduct of emigration business are not very clearly defined. It is, as we have already shown, the duty of the emigration officers to see that none but healthy persons proceed, and, if any contagious disease is found to exist, power is given to clean the ship, and have her fumigated and her belongings disinfected. But no provision is made for the disposal of any sick, infected, or suspected persons so eliminated, as the duty of the emigration officer ceases when he has sent the suspects over the ship's side, and has, in fact, precipitated them into the district of the Port Sanitary Authority. If the latter were in every case provided with hospital accommodation no ill results would follow. But, inasmuch as only two or three Port Authorities have made any such provision, the legalised action of the Board of Trade with respect to outward-bound emigrants directly assists the propagation of epidemic disease, and Gravesend, Liverpool, and Glasgow run this risk continually throughout the year. There should, in fact, be such a chain of co-operation between the Board of Trade Emigration and Port Sanitary Authorities that when the former announce the existence of contagious disease on board any given ship the latter should be ready to remove the infected persons by floating and other ambulances to the proper hospital.

But the most important defect in sanitary legislation is the unsatisfactory state of the laws relating to the actual importation of epidemic disease. The old quarantine laws are still administered by the Customs, and are now practically useless, as they only, so to speak, cover plague and yellow fever. An Order in Council issued in July, 1873, endeavoured to place the Customs *en rapport* with the Port Sanitary Authorities in order to prevent the introduction of cholera from the continent of Europe. But the provisions of the Order, though amply sufficient, were successfully worked in one or two ports only, because an alternative system is allowed, one to be conducted through the Customs, and the other solely and wholly by the Port Authority. The fact that the Customs was not established for sanitary purposes cannot be too soon recognised and acted upon. It must be at the same time recognised that Port Sanitary Authorities will have to glean a good many leaves out of the Customs' book before they can run alone, and must always afterwards be largely indebted to Customs officers for information on which to base good and practical sanitary work. But the time has now arrived when the old quarantine laws should, in accordance with the recommendations adopted at the Sanitary Congress held at Vienna in the autumn of last year, be abolished, and our chief fiscal department be relieved from a class of duty that has always, as we believe, been eminently distasteful to its executive officers in all grades of the service.

Annotations.

"Ne quid nimis."

THE METROPOLITAN MORTALITY RETURNS.

THE London vestries seem loth to accept the decision of the President of the Local Government Board, given some time since, to the effect that the Registrar-General was perfectly justified in the course he took, in requiring that, after the date when the new Registration Act came into operation, the metropolitan as well as the provincial registrars should be paid for furnishing to the various sanitary authorities periodical returns of the particulars relating to deaths registered. On the 19th inst., a deputation representing the vestries of Islington, St. Saviour's, St. George's, and St. Giles's, waited upon the President of the Local Government Board, and again urged that the Registrar-General should be "required" to recommence furnishing mortality returns gratuitously to the local authorities. The total cost to the metropolitan ratepayers for these returns, under the new system, will be about £300 per annum, paid by more than forty sanitary authorities to over one hundred and thirty registrars; and the value of these returns, when compared with their small cost, fills one with astonishment at the persistent shabbiness of our London vestries, in objecting to the payment of the 2d. per entry, which has been fixed by Parliament as the legal fee for such service. It is but fair to state that several of the metropolitan vestries have already made arrangements with the local registrars for furnishing their weekly returns, which will now be in the hands of the medical officers of health on Monday morning instead of Wednesday night, as under the old gratuitous system. In some cases, and we may cite Lambeth as an example, in addition to arrangements for their weekly returns, each registrar is furnished with a supply of post cards, with printed address, on which a *daily* return is made to the medical officer of all deaths from zymotic diseases, and the particulars relating to them. The value of such daily information, for which the registrar is entitled to a special fee, can readily be understood.

BIOGENESIS.

A PAPER we ought to have noticed before appeared in the last volume of the Philosophical Transactions by Dr. Roberts, of Manchester, on Biogenesis. Dr. Roberts points out that the two theories of Panspermism and Abiogenesis are not necessarily wholly destructive of each other, and that it is conceivable that whilst the ordinary and common origin of bacteria and torulæ is by procession from pre-existing germs, there may also be conditions in which they arise *de novo*. The position is that of pathologists in regard to contagious diseases. These are now commonly believed to be propagated

by contagion, but no physician would say that they did not probably at one time, and might not again now, spring up *de novo*. The first inquiries made by Dr. Roberts consisted of an examination of the conditions under which organic liquids and mixtures are rendered barren by heat; in the second is investigated the question whether the normal juices and tissues of animals and plants are capable of producing organisms without infection by extraneous germs. In the third section the facts adduced in the two previous sections are considered in their bearing on the origin of bacteria and torulæ, and some of the alleged cases of abiogenesis are tested experimentally. Dr. Roberts found he could render decoction of turnip or beef-tea sterile by boiling it in a flask the neck of which was plugged with cotton-wool, through which a tube, bent in the form of the letter J, passed. Even when the tube was quite open to the air, the bend of the tube appeared to be sufficient to arrest the entrance of all germs from without; but if the bent tube were depressed till the fluid entered, the formation and development of bacteria immediately commenced.

In another series of experiments he plugged small pipettes partially filled with various infusions, and immersed them in boiling water, brine, or oil, and found that some substances, as citrates, acetates, and tartrates, infusions of meat, fish, and ordinary succulent vegetable, are sterilised by five or ten minutes' boiling, and subsequent filtration; others, as blood, milk, turnip infusion with cheese, require from twenty to forty minutes' boiling to sterilise them; and, finally, others, as hay infusion rendered slightly alkaline by ammonia, resist sterilisation even when boiled for as long a period as an hour; in one case a film of leptothrix filaments appeared even when the boiling had been protracted for three hours. Nevertheless, the general conclusion at which Dr. Roberts has arrived is, that, whilst the temperature of boiling water, with due care to exclude the entrance of germs either through the air or water, is sufficient to sterilise all ordinary solutions, bacteria and other organisms will occasionally develop, *in certain media*, even after exposure to such a temperature. Dr. Roberts is therefore essentially a panspermist, but he admits that this general and common mode may be supplemented by another and an abiogenic mode of origin.

THE ARTISANS' DWELLINGS BILL.

THIS Bill is now in committee, and there can be little doubt that it will pass without anything like real opposition. Indeed, the critics of the Bill show a singular amount of ignorance not only of the scope of the proposed measure, but also of the evils which it is intended to counteract; and although there is much that might be said in the way of fair criticism (as we pointed out in our article of March 6th), scarcely any of the members taking part in the debate seem capable of uttering these criticisms so as to command attention. The alterations which have been made are mostly trivial. 1. The title has been changed to "The Artisans and Labourers' Dwellings Act of 1875." 2. The powers of the Bill have been extended to Ireland. 3. Additional power has been given to the local authority to consider official representations to the effect "that any houses, courts, or alleys within the area under their jurisdiction are unfit for human habitation," and the local authorities may consider "the want of light or proper ventilation or conveniences, or any other sanitary defects," as reason sufficient for putting the Act in force. This is the most important amendment which has yet been made, and it will make the avoidance of the Act by vestries and similar bodies far more difficult than it otherwise would have been. 4. Official representations may be made by two justices of the peace or twelve ratepayers. This is certainly an improvement, although it is not impossible that in practice a couple of crotchety borough magistrates may be found capable of giving infinite trouble and of bringing the Act into disrepute.

Professor Fawcett took up the time of the House in a ridiculous attempt to expunge all mention of the "working classes" from the Bill. We do not pretend to say that the Bill would not be as useful without this phrase, but we should advise those who do not know who the working classes are, to go among the operatives in Clerkenwell or Soho, where they will find hundreds of thousands of honest folk, not on strike, but working hard to earn their living by their skill and industry, and in spite of their honesty, their industry, and their skill, doing so in dwellings which are absolutely unfit for human habitation. The object of the Bill is to overcome that great obstacle to improvement, the acquisition of land, and to enable authorities to erect suitable dwellings for the hard-working people of overcrowded towns who must live near their work. As for the non-working classes, the drunkards, thieves, and the criminally lazy, it will be time enough to think of them when their honest fellows have been attended to. The object of the measure is not to provide luxuries for those dregs of society who are scarcely worthy of life, but to preserve health among, and prevent the degradation, of those who are the real sinews of our commerce.

NAUTICO-MEDICAL NOTES.

THE First Lord of the Admiralty announced on the 18th inst. that H.M.S. *Devastation* was being prepared for a cruise to Malta, and she is now awaiting final orders outside Portsmouth Harbour. We presume that many radical changes have been made in the ventilation, or she could not have been classed as a sea-going ship. It seems, from a description that appeared in *Naval Science* some months ago, that the plenum principle was originally adopted, air being supplied by fans working at the bottom of shafts placed near the turret, and communicating with pipes that open into all the cabins and berths. But hitherto, when the ship has been steaming against a heavy sea, or has been put in order of battle with battened hatches, &c., the air below has become foul in a very short space of time. It is well that this ship, the *Glatton*, and others of the same class now in course of construction, are not intended to be, as a rule, sea-going ships; for, as has been remarked, some weeks must elapse before the crews of these peculiarly constructed vessels could be got into good working order, and by the time this was accomplished the defective sanitary condition of the men's quarters would render a change of hands inevitable. This fact goes to confirm an oft-reiterated opinion that the Construction Department at the Admiralty should include among its members an officer whose specialty is the ventilation of ships, so that in the designing of any new vessel the lines should be laid out with some sort of reference to the sanitary condition of her future inhabitants. It is as unscientific to design a ship without some organised provision for ventilation as to build a house without sewers or sink-traps.

Captain Bedford Pim, R.N., has asked for a return of persons serving in British ships as surgeons without diplomas. We doubt very much whether such a return can be obtained. No regular register has been kept of medical officers serving in the mercantile marine, either with or without qualifications, and, in spite of random statements to the contrary, we know that many medical officers under twenty-one years of age have signed articles as ship-doctors. It is possible, however, that the return asked for by Capt. Pim may be obtained from the office of the Registrar-General of Seamen, and, if approximately accurate, will certainly show

the necessity of instituting means whereby the qualifications of ship-surgeons can be ascertained as accurately as those of candidates for the army or navy. The demand for mercantile marine medical officers has increased during the last ten years considerably, especially for Anglo-Indian and telegraph steamships, and on board the best class of these a very fair scale of pay is given. British sailors and the travelling public have therefore a right to know that the much advertised "experienced surgeon" is really fit for a responsible post.

The importance of shipping healthy sailors is now fully appreciated by owners and masters of British vessels, and, from various discussions that have lately occurred on this question, it is very probable that a clause rendering the medical examination of seamen obligatory will be inserted in the Merchant Shipping Bill, the second reading of which is fixed for the 8th proximo.

That supposed panacea for sea sickness, the *Bessemer*, was "interviewed" by a large number of nautical and unnautical persons last week. We must reserve our comments until she is actually "bridging" the Channel, being desirous to judge for ourselves whether the "saloon" will prove to be a perfect and convenient substitute for chloral hydrate, brandy-and-water, a "good meal," the horizontal position, and a thousand other prophylactics against the *mal de mer*.

UNDERGROUND MORTALITY AT BERLIN.

AT the second meeting of the German Public Health Association, held at Dantzic in September last, an interesting paper was read by Dr. Schwabe, of Berlin, on the "Influence of different classes of Dwellings upon the Health of their Occupants, as deduced from Statistics." The chief feature of the paper was the demonstration of the unhealthiness of the "cellar-dwellings" (*Kellerwohnungen*), which are inhabited by so large a proportion of the lower classes in Berlin. The paper opened with a comparison of the mortality from epidemic and non-epidemic diseases in that city during each year from 1853 to 1871; the term "epidemic" being made to include the infectious diseases, together with phthisis and diarrhœa. Ever since the year 1860 the mortality among this wide class of disease has tended to increase, a tendency which Dr. Schwabe attributed to the introduction in that year of improved water-supply to Berlin, without, however, corresponding improvements being made in the drainage. Thus, as he well put it, from the impregnation of the subsoil water with impurities, the soil of Berlin has become richly charged with material favouring the luxuriant growth of epidemic disease. The increase in these diseases has been not only in number but in severity of type; and many suffering from chronic constitutional affections have succumbed to the epidemics from their inability to resist their inroad. These untoward results had ensued upon the adoption of a false hygienic principle, that of introducing improved supply of water without adopting measures to carry away the refuse.

Passing now to the main subject of his paper, Dr. Schwabe stated that at the last Census the death-rate among the dwellers in different kinds of habitations was as follows: Among those inhabiting the first-floors of houses it was 21·6 per 1000; for the ground-floor inhabitants, 22; for cellar-dwellers, 25·3. The death-rate in second-floor rooms was 21·8; in third-floor, 22·6; and in fourth or higher, 28·2. The mortality was thus greatest in the cellar-dwellings and those of the highest floors in houses, that in the latter exceeding the former. This difference is less obvious and even reversed when the factor of social well-being is taken into account, for it appears that the inhabitants of the attics of Berlin are, as a rule, poorer than those of the cellars. Thus the occupants of cellars include about 11 per cent. of retail traders, 3 per cent. of wine storekeepers &c., 20 per cent. of small provision and stuff dealers, and 34 per cent. of tailors, shoemakers, joiners, &c. The remainder (32 per cent.) belong to the labouring class, and it is by these that the upper floors of houses are chiefly occupied. From the year 1854 to 1873 the percentage mortality among the cellar-dwellers increased from 7·5 to 9·7, but remained about the same among the inhabitants of other classes of dwellings. The mortality from epidemic diseases in 1853 was 21·8 per cent. for the former, and 18·5 for the latter; in 1873 it reached 39·5 among the cellar-dwellers, and 34·4 among the other classes. This increased death-rate among the inhabitants of cellars was illustrated by Dr. Schwabe for each of the following groups of disease:—(1) Infectious disease, (2) phthisis, and (3) diarrhœa, by taking 1000 as an arbitrary standard of the mortality of each group in 1854. Thus, among the cellar-dwellers this number has increased in the past twenty years, in the first group of affections, from 1000 to 3800; in the second group to 3000; and in the third to 7000; the great increase in diarrhœal affections among underground-dwellers having been also noticed in other large towns, where cellars seem to form a fitting nidus for their development. The conclusion arrived at is that the mortality increases to a greater extent in the cellar-dwellings than in any other kind of habitation, that epidemics are of a more severe type than in other places, and that cellars especially favour the development of diarrhœal disorders and infectious diseases. A few words, showing the proportional increase in still-births among the inhabitants of cellars, terminates this brief paper, the author of which himself fell a victim to typhus, contracted at that favourite suburb of Berlin, Charlottenburg, where an epidemic was rife, on his return home from reading the paper in which he so trenchantly exposed what he believed to be the true cause of the prevalence of such plagues.

ARMY MEDICAL MATTERS.

WE can only hope that the War Minister may be urged to express his intentions in regard to the army medical officers when Vote 4 of the Army Estimates is discussed. It is a matter of great importance that the just causes for all the present discontent should be redressed without any unnecessary delay. In order to maintain a reasonable flow of promotion, a system of compulsory retirement at sixty years of age for the upper ranks must sooner or later be extended to the Army Medical Service. Incentives to work of some kind or other must be held out to medical officers as to other men, and it amounts to a platitude to say that zeal soon dies out in a body of men who have little or nothing to hope for in the future. The most natural and legitimate object of expectation is promotion, and as things are at present in the Army Medical Service, there is but little to be hoped for in this direction. The same measure that was found to be necessary in the case of the Medical Service of the navy is required every bit as much for that of the army—viz., a method of compulsory retirement for the top rank. There is no other way of creating and maintaining a healthy flow of promotion. We should only be repeating ourselves and wearying our readers by adverting to other causes of discontent now. So great is the distrust that has been engendered that we agree with a correspondent in thinking that confidence will not be restored unless everything to which the army surgeon is entitled be put down in black and white with unmistakable clearness. Amongst the various schemes that have been laid before the Secretary for War is one which embodies the proposal that the department should in future be known as "the Royal Medical Staff Corps," the officers of which should have command of the subordinate Army Hospital Corps; that to this

staff corps should be given the sole charge and control in military hospitals, subject only to the authority of the general officer commanding; that medical officers should be relieved of the charge of stores and medical comforts; that the *maximum* period of service before promotion to the rank of surgeon-major should not exceed fifteen years' full-pay service, retirement being obligatory at sixty years of age; and that all medical officers should be placed upon a foreign service roster, and go abroad in their turn. These are among the main points in a document which has already been published *in extenso* in some military journals.

TREATMENT OF FRACTURE OF THE PATELLA.

THE current number of the *Practitioner* contains three communications on this subject, all of which embody suggestions of great value. The first is by Mr. Spence, of Edinburgh, who advocates a modification of Malgaigne's method by adapting the screw-hooks not directly to the skin, but to layers of thick moleskin plaster applied above and below the joint, the limb being placed on an inclined plane or slung at a corresponding inclination. Care should be taken that the plaster be firmly adherent to the skin.

Mr. Callender follows with a description of a method which he has pursued for many years, and described in the last volume of the St. Bartholomew's Hospital Reports. It is best given in his own words:—

"A day or two after admission the limb is placed on one of Neville's splints, to the foot-piece of which is clamped an iron, with two arms projecting beyond the foot-piece, at the end of each of which a pulley is fixed, a line from which will fall clear of the foot of the bedstead. A piece of ordinary adhesive plaster is applied to the front of the thigh, its distal end being curved to fit the upper margin of the patella, each horn of the crescent being arranged so as to form a loop. The edge of the plaster is protected by a strip of lint, to prevent it from irritating the skin when under traction. A similar provision is made for the leg and for the lower fragment of the patella, and both pieces of plaster are further secured by bandages passing over them and round the Neville splint. If a piece of cord is attached to each of the loops at the horns of the lower plaster, and is then passed through the upper loops, and is thence carried to the pulley at the end of the outrigger, below which the two cords may be united and made to support a weight, it is evident that the entire weight-traction will draw the horns of the two crescents together and approximate the fragments of the knee-cap."

Lastly, Mr. McGill, of Leeds, supports strongly Mr. Pridgin Teale's method of simple rest of the limb between sand-bags, the heel being slightly elevated, and he records two striking cases proving the efficacy of this plan. He believes this spontaneous cure (i.e., firm fibrous union) to be brought about by the relaxation of the quadriceps extensor a few days after the injury, which is followed by tonic contraction; to the slow absorption of the effusion between the fragments, and the formation of a fibrous band between their opposing surfaces. He also advocates a rectangular splint in cases of fracture of the olecranon.

A CORONER ON CHEMISTS' PRESCRIBING: A TESTIMONIAL-VERDICT.

HAPPY is the man who, instead of being censured in a verdict, is the subject of a eulogy. This was the felicitous case of a chemist, Mr. James, of Old Stratford, who recently prescribed a cough mixture for John Aubrey, aged sixty-three, on the representation of his daughter that he suffered from cough, pain in the chest, a slight difficulty in breathing, together with a weakness. In addition to this mixture an "occasional drop" of brandy as a stimulant was recommended. On the evening of the same day John Aubrey died. He had the benefit of no other advice or means to "obviate the tendency to death" than the medicine prescribed by a chemist over his counter. An inquest was, of course, held. Mr. Bernard Rice, M.B., gave evidence, but does not seem to have made a post-mortem examination. He found the body not over-nourished. The Coroner complimented Mr. James on his capacity, and observed that the country was greatly indebted to such a class of persons. He was a registered chemist, and qualified to give prescriptions, and such chemists as Mr. James were conferring a great benefit to people by their ministrations, especially to the poorer classes. The jury concurred with the coroner in his views.

Mr. James is, no doubt, a highly respectable man. But we submit that what the coroner was called on to speak to was, not the character of Mr. James, but the death of an old man without any proper means being used to avert death. The symptoms detailed by the chemist to a medical man would have conveyed the information of danger from bronchitis, or, possibly, senile pneumonia, and the necessity for immediate skilled advice. We should gather also that he had possibly been rather underfed for some time. These were facts to bring out at the inquest in the interest of life, and with a view to teach people how to preserve it. They were all overlooked; the coroner lauded the chemist who evidently had no idea of the gravity of the symptoms for which he was called on to prescribe. Had he had such an idea we do him the justice to believe that he would have referred the daughter to a medical man. We regard the inquiry as a very imperfect and unsatisfactory one.

ABNORMAL PIGMENTATION OF THE SKIN.

A REMARKABLE case of abnormal congenital distribution of the cutaneous pigment is related by Drs. Forlanini and Gatti in the *Annali Universali di Medicina e Chirurgia*. The patient is a country girl seventeen years of age, whose father is living and healthy; her mother died of some unknown disease. She is of small size, well-made, her intelligence somewhat low. The skin is generally of an earthy-brown colour, resembling that usually found in her class, and the hair black. The abnormal condition consists in the existence of large patches of a milk-white colour, which are chiefly found on the trunk, but there are also some smaller patches on the limbs and face. In addition to these, there are spots and lines of blackish-brown colour in various parts. It appears that the patient had good health until September, 1874, when she came under treatment for an attack of gastric catarrh, and the condition of the skin was thus brought under notice. From her father's statements there seemed to be no doubt that the condition was congenital. The spots on the face are chiefly small spots of a blackish-brown colour, darker than the surrounding skin. On the neck there are some patches, consisting of small brown spots, scattered over a milk-white base. The lower half of the lateral region of the neck, the supra- and infra-clavicular regions, and the upper and front part of the chest as low as the second intercostal space on the right side, and the third on the left, extending outwards to the level of the nipple, are of a milk-white colour. A smaller patch of similar colour exists on the left breast. On the abdomen are three large milk-white patches, one of medium size over the epigastrium, another surrounding the umbilicus, and a third, of large size, begins at the centre of the left inguinal region, and occupies the whole hypogastric and the right inguinal and iliac regions. Two large patches are also found on the back, one in the cervical, the other in the lumbar region; and there are small white and brown patches on the perineum. On the right forearm are also two white patches. The colour of these parts is described

as being milk-white, with a slight rosy tint. The skin is delicate, flexible, and translucent, allowing the colour of the veins to be seen through, and the colour is uniform throughout the patches. On the more deeply pigmented patches the hair is somewhat thick and black, whilst in the colourless parts there is a scanty, whitish, lanuginous hair. The discoloured patches pass gradually into the surrounding skin, and there is no alteration of level at the margin. The functions of the skin appear to be normal in every respect. A slight increase of the pigmentation around the optic papilla was observed, but in every other respect the colour of the fundus oculi was normal.

In remarking upon the case, the authors observe that they have been unable to find any similar case upon record in which the condition was congenital. Cases of partial albinism or leucoderma as a congenital condition have chiefly been observed in negroes, although Hebra remarks that he believes he has seen cases of partial absence of the pigment in light-skinned persons. Most of the cases on record have been acquired. The condition is described by the authors as partial albinism with partial nigrism.

MERCANTILE MARINE HOSPITAL SERVICE.

WE have been favoured with an early copy of the Mercantile Marine Hospital Service Bill, which has been brought into the House by Capt. Bedford Pim and Mr. Wheelhouse, and provides for the medical inspection of seamen and the organisation of a hospital service for sailors of the merchant navy. (If a clause for the medical examination of seamen be introduced into the Merchant Shipping Bill, one of the chief objects of the measure will be accomplished.) The sections relating to hospital service appear to have been framed very much in accordance with the rules that govern the marine hospital service of the United States, an account of which appeared in THE LANCET some few weeks ago. It is proposed to divide the coast line of the kingdom into ten districts for England, five for Scotland, and five for Ireland, and to establish marine hospitals in each of these districts, in accordance with the requirements of the respective ports. The Bill provides for the appointment of a medical director and assistants, who shall form a sort of mercantile marine medical staff, to act under the "proper authority" (as we suppose, the Board of Trade), inspect seamen, provisions, medicines, and antiscorbutics, and attend also to the hospital inmates. A similar staff is proposed for the colonial ports, in accordance with analogous sections in former Acts. It is proposed to defray the expenses of this service by levying a tax of sixpence in the pound per month on the wages of every officer and seaman employed on British vessels, the money so raised to be called the "Mercantile Marine Hospital Fund." We reserve critical comments on this very large and comprehensive measure until it has passed the second reading, having already on several occasions expressed a decided opinion as to the importance of establishing such a "service" as is indicated in the Bill.

EPIDEMIC DISEASE ROUND LONDON.

No one can doubt the value of the additional information which the Registrar-General has published in his Weekly Return since the beginning of the year relating to what is there called the "outer ring." To the thousands of season-ticket holders who live just over the borders of the registration area, it cannot but be useful that the health of these neighbourhoods should be regularly weighed in the balances, and those who know them best will probably be least surprised if it is sometimes found wanting. The valley of the Thames especially is not without its "rookeries," which zymotic disease in the long run unerringly finds out. The Registrar-General's last Weekly Return calls attention to the prevalence of zymotic disease in one or two parts of this "outer ring." Two deaths from small-pox were registered in Hampton, and the disease is reported to be also prevalent in Kingston. The registrar of Wimbledon notices that scarlet fever is very prevalent in his district, and that two deaths occurred towards the end of last week. In the north of London three deaths from enteric fever have recently been registered at Tottenham, the outbreak being attributed to the use of water from a polluted well which has since been closed; and two deaths from fever were last week recorded in the district of Edmonton. Notwithstanding these local cases, the annual death-rate among the three-quarters of a million of persons living in this "outer ring" was only 19·5 per thousand last week, against 26·2 in inner London; and the rate from the seven principal zymotic diseases was 1·8 instead of 2·7 per thousand.

THE PRINCE OF WALES'S TRIP TO INDIA.

WE understand that Dr. Fayrer, Physician to the Council of India, will probably accompany H.R.H. the Prince of Wales during his contemplated tour. Considering Dr. Fayrer's long and distinguished professional services in India, and his acquaintance with the country and its language, we feel sure that the wisdom of this selection will be ratified by the profession generally, and be a source of gratification to the Indian Medical Service, of which Dr. Fayrer is a member. The rumoured visit of the future King of England to a tropical country might be regarded with a little misgiving by timid people, but there is really no more risk to health in making a tour in India than in doing the same thing anywhere else, if the proper season be selected. In addition to his professional qualifications, Dr. Fayrer has the reputation of being a keen lover of sport. It may be remembered that he accompanied the Duke of Edinburgh on the occasion of his Royal Highness's Indian tour.

A NEW LECTURESHIP.

A FEW weeks since, in his presidential address, Mr. James Lane suggested to the Harveian Society to utilise its surplus funds in the establishment of a lectureship. The Council of the Society subsequently discussed this proposition, and appointed a committee to consider and report upon the subject, and the result was the preparation of a definite scheme for giving effect to the original suggestion of Mr. Lane, and this was adopted unanimously at a recent meeting of the Society made special for the purpose. The new lectureship is to be entitled the Harveian. The lecturer is to be selected by the Council from amongst the Fellows of the Society, and is to deliver a course of two or three lectures on some subject of practical importance in surgery, medicine, or obstetrics, and he will receive a small fee for each prelection.

THE MEDICAL DISTRICTS OF ISLINGTON.

WE lately reported with satisfaction, that the guardians had appointed a sub-committee to inquire into the grievances of the medical officers arising out of the extreme inequality of their districts in point both of population and area. We regret to say that this course has ended in an utterly unsatisfactory way. The committee does not attempt to deny the facts, but declines to make any suggestions for altering them. Instead of pointing out arrangements by which the work and the pay of their medical officers could be equitably apportioned, they find that they have little power to deal with the question at all, and refer the medical officers, "if they feel aggrieved," to the Local Government Board. This is a specimen of the mode in which a collective body will

shirk a plain duty in a way of which each of them in any individual transaction would be ashamed. We notice, with pleasure, that the chairman of the committee, Mr. Stonelake, objected to the report. He contended that the inquiries of the committee had shown great inequalities; that while one officer had in the year 1600 patients, another had 204 with a smaller district, the salaries being nearly the same. Of course the medical officers will now carry their grievances to the Local Government Board, where, their case being so clear, it is to be hoped they will get redress; but they ought to have had the support of the local authorities, and are distinctly injured in not receiving it.

M. PAJOT.

M. PAJOT, the distinguished Professor of Obstetrics of Paris, who used to attract crowded audiences, but who for some years had ceased to lecture, has just recommenced the course, in response to a petition signed by a large number of students. In his opening lecture he claimed the indulgence of his audience on account of his age and want of strength, saying that he had not thought he could be useful to them any longer. He pointed out to the students that the object of the course was to teach them to learn, and remarked that attendance on twelve labours was more instructive than a thousand, if carefully watched and understood; adding that *"la théorie n'est que de la pratique expliquée, la pratique n'est que de la théorie appliquée."* The brilliant lecture which followed was listened to by a crowded audience, and his reception was one continued ovation. We trust the learned professor may yet have a long course of usefulness before him.

THE PUBLIC HEALTH BILL.

MR. SCLATER-BOOTH announced in the House of Commons on Monday last, that he intended to have the whole of the substantial amendments introduced into the Public Health Bill set forth and clearly explained in a paper which would accompany the measure. It is to be hoped that this explanation will throw some light upon the principles of administration of the Board in regard to the appointment of medical officers of health, and that it may lead to the production of the instructions to the inspectors of the Board on this subject. Every inspector appeared to act as seemed best to himself, and in the main upon independent instructions.

GREAT dissatisfaction appears to be felt with the Sale of Food and Drugs Bill in its present shape, and several deputations have lately waited on the President of the Local Government Board to urge that certain alterations and amendments should be made in the Bill before the Government passes it into law. We have freely criticised the Bill, and early pointed out the defects with which it abounds, many of which are now ventilated in deputation at Gwydyr House. We observe that the spokesman of one deputation insisted *inter alia* on the creation of a central analytical authority, and that the officers of the Inland Revenue Laboratory at Somerset House should be the final court of appeal in all cases of disputed analyses.

AT the meeting of the Royal Medical and Chirurgical Society on Tuesday evening, the 23rd inst., a very able and elaborate paper by Mr. Walter Rivington on a case of Pulsating Tumour of the Orbit cured by Ligature of the Common Carotid Artery was read. The paper was accompanied by an historical and critical notice of nearly all the recorded cases of intra-orbital aneurism; and the discussion, which was prolonged to a late hour, was of much interest. We shall publish a fuller report of the meeting next week.

DR. SEDGWICK SAUNDERS, medical officer of health for the City, complains in a recent report of the scanty supply of water, and the defective condition of the receptacles used for its storage in some of the most unhealthy and crowded places in the City, and urges the immediate erection of the 65 stand pipes ordered in November last, and intended to supply in all 536 houses. The zymotic diseases were rarely absent from those courts in which the water-supply was deficient, or where the receptacles containing it were so placed as to invite direct contamination. Dr. Saunders has submitted to the authorities a list of nearly 200 houses in his district in which the water-cisterns were in a filthy condition, and suggests that the landlords of such houses should be compelled to demolish the water-butts now in use, and erect in their stead proper receptacles. We trust that action will be immediately taken by the Commissioners on their medical officer's timely warning and advice. Dangerous defects like those pointed out should be remedied before the advent of the warm weather.

THE *Manchester Guardian* states that an association of local capitalists have made a proposal to the managers of the Infirmary of the town to purchase the institution and the land attached to it for a sum exceeding three-quarters of a million sterling. It is believed that the Board of Governors is disposed to look favourably on the offer. It has been justly argued that the best site for an infirmary is not in the centre of a large city, but in the suburbs, and a plan for erecting a similar institution in a district where the patients can breathe pure air would meet with general approval. A site would probably be sought in the direction of Owens College. With a new infirmary in that neighbourhood our contemporary would claim for the town a chain of medical institutions without a rival in the country. Before the scheme can be definitely adopted the sanction of the Charity Commissioners and of Parliament will have to be obtained.

THERE appears to be a considerable amount of zymotic disease at the present time in Lambeth. Dr. McCormac, medical officer of health for the district, reports that during the last four weeks 61 deaths from this class of disorders were registered, and a large number of cases which did not terminate fatally had been attended by the Poor-law surgeons. It is not surprising, after this evidence of unhealthiness, to learn that the water supplied to the parish is of bad quality. On analysis, several separate supplies were found to contain large quantities of organic matter, besides impurities in the way of earth salts. The water of the Southwark Company was especially bad.

THE Chairman of the Lancashire and Yorkshire Railway Company, Mr. Thomas Dugdale, J.P., whose death, at the age of seventy-seven, occurred on the 17th inst., was a member of our profession, and was for many years engaged in active practice. Possessed of great business capacities, he gradually turned his attention to commercial pursuits, and ultimately gave himself up entirely to them. The railway of which he became chairman five or six years ago, and the Manchester and County Bank, of which he was also chairman, were amongst the enterprises with which he was intimately associated. In politics he was a Conservative.

THE chair of Midwifery in the University of Aberdeen is vacant by the death of Dr. A. Inglis. The appointment is in the gift of the Crown. Dr. A. Inglis obtained the Edinburgh M.D. degree in 1859, and was a member of many learned societies, and the author of several valuable contributions to obstetric science.

THE sanitary condition and water-supply of West Auckland would seem, from a recent report, to call for inquiry. A great many of the houses are without ashpit accommodation. There is a great deficiency of privies; in one street there were only three for the occupants of twenty-four houses, and even these were in a very filthy condition, with putrid liquid on the floors, and situated only six feet from the dwelling rooms. The drainage is defective, many of the houses being unprovided with stench-traps, and several of the drains being more or less closed up and neglected. The main sewer, which runs through the village, is without a proper channel to convey its contents from its mouth into the river, about ten yards distant. It is only natural, after ascertaining the state of the place, to hear that the inhabitants dread the occurrence of an epidemic. Once a zymotic disease declared itself, it would be difficult to confine it within a small area.

MR. CHARLEY has given notice in Parliament that he will move for a return of all the baby farms which have been registered under the Infant Life Protection Act. Mr. Cross has had his attention called to the recent conviction at the Exeter Assizes of a baby farmer. The woman had starved to death an infant entrusted to her care, and it was elicited during the trial that three other infants placed in her charge had died in her house, which was unregistered, during the previous year and a half. Mr. Justice Lush, on the occasion, stated that baby-farming had of late prevailed to such an extent that it was necessary to vigorously repress or efficiently regulate it. Local authorities should use the greatest vigilance in detecting the existence of unregistered homes for children. The provisions of the Act of 1872, if thoroughly carried out, are capable of greatly diminishing the amount of infanticide.

THE Greenwich Guardians have had their consideration directed to the fact that out of 297 patients suffering from typhus fever admitted to the Stockwell Hospital in 1874, no less than 118 came from the Greenwich Union. The parish does not seem to have been free of the fever during the year—a very serious condition of affairs. Cases still continue to be reported, in spite of the efforts made to stamp out the disease. Typhus is so essentially a disease of the ill-fed and ill-housed, that its persistence in a district by no means the poorest in the metropolis calls for the strictest vigilance on the part of the sanitary authorities.

IT has been decided to form a medical society for East Cheshire, which will comprise all the medical practitioners of the district. At a meeting held last week to further the movement it was explained that the association would prove equally beneficial to the public and the profession. A good library will be established in connexion with the society, so that the members may at any time avail themselves of reference to current medical literature. The meetings will be held on the last Friday in each month. Mr. Birchenall has been elected president and Dr. Vaux vice-president for the ensuing year.

AT the ceremony of opening a cottage hospital at Teddington on Saturday last Lord George Hamilton, M.P., delivered an appropriate address bearing on the subject of medical relief. The new institution has commenced its existence under most favourable auspices, and promises to be largely instrumental in alleviating suffering and disease. We wish it every success, and hope that among the wealthy inhabitants of the district there will be no lack of liberal donors and subscribers.

WE understand that the General Medical Council will meet on or about the 10th of June next.

THE mortality in Dublin among medical men of a certain age has been lately unusually large. On the 13th inst. another old practitioner, Dr. Ireland, passed away, aged eighty-eight years. Dr. Ireland formerly practised midwifery with considerable success, and was much esteemed for his abilities, which were of a high order. He married three times, his third wife and three children surviving him.

MR. E. WATKIN, M.P., has written to a daily contemporary stating, in answer to reflections on the sanitary condition of Folkestone made by Lord Robert Montagu in committee on the Artisans' Dwellings Bill, that the returns of the medical officer of health for the town prove that during the years 1873 and 1874 there were only four deaths from fever, while no fatal case of small-pox occurred.

MR. COWPER TEMPLE has obtained leave in Parliament to introduce a Bill to amend the Medical Act, 1858, so far as relates to the registration of women who have taken the degree of Doctor of Medicine in a foreign university.

DR. WILLIAM STOKES, Regius Professor of Physic at Dublin University, is about to relinquish the post of Senior Physician to the Meath Hospital, after forty-nine years of hard work in the service of the institution.

DISCUSSION AT THE OBSTETRICAL SOCIETY ON PUERPERAL FEVER.

AT the meeting of the Obstetrical Society on Wednesday, April the 7th, Mr. Spencer Wells will open a discussion on the Relation of Puerperal Fever to the Infective Diseases and Pyæmia. The attention of those who take part in the discussion is requested—

1. To the question, if there be any form of continued fever, communicated by contagion or infection, and occurring in connexion with childbirth, which is distinctly caused by a special morbid poison, and as definite in its progress and the local lesions associated with it, as typhus or typhoid, scarlet fever, measles, or small-pox?

2. May all forms of puerperal fever be referred to attacks of some infective continued fever—as scarlet fever or measles—occurring in connexion with childbirth on the one hand; or, on the other, to some form of surgical fever, or to erysipelas, caused by or associated with changes in the uterus and neighbouring parts following the process of childbirth?

3. If all cases of contagious and infectious diseases which occur under other conditions than that of childbirth are set aside, does there remain any such disease as puerperal fever?

4. Assuming that a form of continued fever, communicable by inoculation, contagion, or infection, does frequently occur in connexion with childbirth, how can its spread in private and in hospital practice be most certainly prevented or checked?

5. What relation have bacteria and allied organic forms to the pyæmic process in the puerperal state?

6. What is the value of antiseptics in the prevention and curative treatment of puerperal fever?

The meeting will commence at 8 o'clock. The formal preliminary business will occupy but a few minutes. Mr. Wells will at its conclusion commence his opening address, and will limit himself to fifteen minutes. It is expected that the speakers generally will not exceed this limit.

Dr. Braxton Hicks, Dr. Barnes, Mr. Jonathan Hutchinson, Dr. Hall Davis, Dr. B. W. Richardson, Dr. William Squire, and many other gentlemen, are expected to take part in the discussion; and at the second meeting, should the dis-

cussion be adjourned, it is hoped that Professor Lister of Edinburgh, and Professor Billroth of Vienna, will be present, with Dr. Fordyce Barker, of New York.

Mr. Wells will ask for a few minutes at the close of the discussion to reply to the various speakers.

RUMSEY TESTIMONIAL FUND.

AN influential meeting of medical men and others was held on Tuesday last at the General Register Office, Somerset House, under the presidency of Dr. W. Farr, for the purpose of furthering a proposal to present Dr. Henry W. Rumsey with a substantial token of the estimation in which he is held by the profession generally. Dr. Rumsey, who was recently stricken with paralysis, has worked hard in the cause of sanitary progress, and deserves well of his country. Resolutions were passed and preliminaries arranged for an immediate appeal for funds. Subscriptions, which are earnestly solicited, should be paid to the account of the "Rumsey Testimonial Fund," at Messrs. Robarts, Lubbock, and Co.'s Bank, and all other communications should be addressed to the secretary of the fund, Dr. Corfield, 10, Bolton-row, Mayfair. We have no doubt that the movement will prove highly successful, as it deserves to be, and trust that our readers will do all in their power to promote so worthy an object.

Correspondence.

"Audi alteram partem."

THE RISKS OF OBSTETRIC PRACTICE.

To the Editor of THE LANCET.

SIR,—The recent trial at Warwick*, and the liabilities attending obstetric practice, render it very important that we should clearly see our position under the various difficulties which may arise. It is as important to know what not to do as to know what to do. Our sins of commission are more likely to be visited by ill-consequences than those of omission, because, doubtless, they are more readily perceived. Yet this does not explain why errors in midwifery are more subject to criminal actions than errors in surgery. Whatever the explanation, it appears to me very important that we should carefully analyse each case as it comes up, in order that we may avoid the recurrence if possible.

The case I allude to is simple, and may be divided into three parts.

1st. There was a rent in the upper vagina behind, large enough to admit the hand into the peritoneal cavity.

2nd. A prolapse of intestines, part of the ileum, the cæcum appendix, and small portion of colon.

3rd. Fifteen feet of intestines were removed, having been cut away in one piece by scissors.

Let us consider these *seriatim*:—

1st. The vaginal rent. This may occur spontaneously. A very common position of this kind is behind at the upper part, transversely placed. Its cause has been pointed out by myself and Dr. Matthews Duncan. Or it may be produced by the blade of the forceps, carelessly introduced. I was once told of a case where this accident occurred to a medical man. A small knuckle of bowel came through, was strangulated, and sloughed away, leaving a fæcal fistula, which ultimately closed, the patient doing well.

In another case, where a rent was found after death, the medical attendant had attempted to use the forceps, but although he was a very good midwifery practitioner before, in this instance he bungled over it, and a neighbour came and delivered by version. This medical man was at the time under the early symptoms of maniacal attack, in which he died. No prolapse of bowel took place, but peritonitis came on and she died. An inquest was held, but the causation of the rupture was not cleared up.

* Queen v. Peacock.

In the case now under our consideration there was no proof how the vagina was rent, and therefore we shall be safe in assuming it occurred spontaneously during the uterine action, especially as the patient was forty years old, had had many labours, and had required forceps before.

But whatever the cause of a rent, we know that a prolapsus of the bowel can take place, and this brings me to the second point—namely, How was it so great a length as fifteen feet came down? Could it have occurred spontaneously, or must it have been drawn down? Such a question cannot be answered off-hand. Few can answer it at all, because there are but few who have seen many cases of vaginal rent; and to argue simply without experience in the living body, or without experiment in the dead, does not help us much. I fancy most persons would say, "No, I do not think fifteen feet, half the total length of intestine, could come down spontaneously." Yet reflection for a moment will induce a pause before a final answer is given; for when the vermicular motion of the intestines is considered, and the wonderful intrusions they are apt to make into out-of-the-way corners are borne in mind, one would not like to say positively "No." For if fifteen feet can be drawn down, it is no great stretch to suppose that they might be protruded spontaneously. In Cooper's Surgical Dictionary (art. Wounds of Abdomen), a case is narrated where the whole of the intestines, except the duodenum and the arch of the stomach, had escaped through a wound four inches long on the side of the upper abdomen. These had not been dragged out. But it may be said, the situation is different. Is this really so? Consider the great elongation the vagina undergoes by the end of labour. It has often occurred to me, and doubtless has to most of us, that in removing the placenta, one has had to pass the hand as far as the ribs before the os uteri could be entered. I mean, that the uterus receded so readily, that till it was caught and fixed by the external hand, which is not always easy, the internal hand has reached so high. But in most cases the vagina will reach to the umbilicus very readily. This is just about the centre of the mesentery, and therefore if a rent exist behind, at its upper end, there is an opportunity afforded for a prolapse of magnitude. If, therefore, in searching for the insertion of the funis a coil or two of intestines have protruded through, the entanglement of them in the fingers, and the movements of the latter to avoid them or to find the funis, would be sufficient to bring through a large amount, especially if aided by the straining of the woman and much pressure outside. The opening in this case was said to be large enough to admit the hand; we may conclude that just after its occurrence it was somewhat larger.

Speaking from personal experience, which, as regards rent of the vagina alone, is limited to about six cases, I have seen only a slight hernia of the intestines. I think general experience is similar. Supposing that no such a quantity could be proved to have occurred, this does not expel the possibility of it. Neither in the many cases of simple rupture of the uterus I have seen have I found any great amount pass through the rent, though patent. Generally in all these cases, both of vagina and uterus, or both combined, the shock to the system checks the uterine action and the auxiliary forces, so that the patient remains nearly motionless. Again, in cases of combined rupture of vagina and uterus, of which I have seen about eighteen, I have not found any great quantity. Although in this kind the prolapse has been the greatest, in none would it require much to bring down a quantity. The largest quantity I ever felt was in a combined case, where the uterus gave way as the head was coming through the vulva. The pains suddenly went off, and not returning, after some hours I was sent for. All the symptoms of rupture had come on. The forceps were applied and the child delivered. A rent in the front was found extending from the middle of the vagina to the middle of the uterus. It gaped widely, and a large mass of intestine came through. There was, however, no difficulty in reducing them, and the edges were brought together.

A case bearing somewhat on the Warwickshire one occurred to me some years since. I was called to see a woman in whom there was considerable prolapse of the omentum from the vulva. I was told a curious modification of the placenta existed, but the medical man, fearing all was not right, asked me to assist. The pains had subsided while the head was above the brim, a prominent sacrum impeded

somewhat, but a fibroid tumour in the lower part of the uterus also impeded. Turning was accomplished, when this something came down to the vulva. During examination and manipulation it came outside three or four inches, where some two or three hours after I saw it, with the usual appearance of the somewhat fatty kind. Knowing a lesion must exist, I passed my hand within, and found a slit in front from the middle of the vagina to the middle of the uterus. The omentum passed through this, and also a bunch of intestine as large as one's fist. The funis could be traced up to the placenta, which was in that part of the uterus above the rent. Had this omentum not been looked at, but treated as a portion of the membranes (a not difficult mistake to make), dragged down, and very possibly endeavoured to be peeled off, as the membranes sometimes require, the case would not have been without many points of resemblance to the melancholy one we are considering.

But, putting aside the question whether all this mass of intestine could spontaneously come through the opening, it appears to me that the case developed itself in somewhat the following manner:—The child having been separated, and the time having arrived to remove the placenta, the medical man, passing his hand along the side of the funis, which probably was not held firm in the other hand as a guide, not knowing that a rent existed, came to some intestines. Off his guard, he would think both them and the mesentery a portion of the membranes (the most likely error to make), and then, knowing that the membranes lead to the edge of the placenta, he would proceed to detach them, expecting to come to its edge in time. By this means the mesentery—a tender membrane—would be broken through; and then the finger, entangled in the coils of intestine, would readily separate a considerable length before the error was noticed. It is very important that we should recognise the feeble resistance of the mesentery. If a butcher be noticed removing the entrails of a sheep, &c., the ease with which he throws off long lengths will evidence this well: a small rent once made through the mesentery, they are torn off with surprising readiness. Dr. Goodhart, of Guy's Hospital, has kindly tried this point for me in the human subject. He reports the following:—"I tied up the mesentery of a coil of small intestine, and fastened to the tape weights, one by one. The mesentery began to tear away at 11 lb., and gave way suddenly at 13 lb. I next tried hand traction in another part in two places. In both instances the amount of steady traction requisite to tear away the bowel from its attachment was by no means great—more, perhaps, than the traction ordinarily made on the funis, but not more than would be made where the placenta is not readily extracted, and where the funis is torn across in the delivery of it. When once there is a tear, and the bowel separated in the least, and even where only the peritoneal layers are cracked through, leaving still the vessels and the true substance of the mesentery, the coils may be torn away as easily, and almost in much the same manner, as dough may be torn, with no seeming resistance whatever." This it is important to bear in mind, because if we should even scratch with our nail the mesentary unwittingly we might before we are aware have unravelled a foot or two of the intestine.

But there is another source of confusion—namely, in the resemblance of the funis to the intestine. To say we ought not to make a mistake in our diagnosis is, perhaps, quite correct; but to say there are no points of resemblance tends to throw inexperienced men off their guard, and lead careless men into error. The faulty habit of pulling at the cord may lead to the pulling at something like it, with the intention of removing the placenta. The large varicose funis, perhaps not when fully injected by blood, but when half flaccid, is not so very unlike an intestine; nor is the smaller tortuous one unlike a contracted firm small intestine, say near the cæcum. At any rate, I have been shown a portion of both cæcum and ileum as a piece of funis.

Is it not possible that under some circumstances, such as mental fatigue, just roused from bed, cold hands, or a little want of careful examination, the error might occur to many of us? And knowing, from my own experience of hard work in this department, how difficult it is to be always wide-awake, I can scarcely find heart to say to those engaged in its responsibilities more than "Sleep not, for a life depends."

3rd. Regarding the third point of this case, what can be said? When I first heard of a like case I felt at an utter loss to conceive the state of mind which would lead any medical man to remove a quantity of intestine; the descent or pulling down of a length was comprehensible, but to cut away seems so irrational a procedure that I explained it to myself by some temporary loss of control of mind liable to overtake some in appalling circumstances, such as you have alluded to, and such as Dickens, in "Pickwick Papers," portrays when Mr. Pickwick falls in through the ice and Mr. Tupman rushes off exclaiming, Fire! But when I heard of other instances, I was led to reflect whether there were any explanation for it. For this case does not by any means stand alone. I have heard of four other cases brought to trial; and two I have heard of privately. I was once shown about a foot of small intestine and cæcum with appendix, which had been removed in like manner. What can the reason be? Is it, after being torn through as I have suggested, thought to be the funis of another child? Yet one would say this was scarcely possible, because it would be only cut between the two ties. I can scarcely think that it can have been done with the surgical views which were brought to support the Warwickshire case. A gentleman who had an inability to know the funis from intestine would hardly have such transcendental knowledge of surgery as to lead him to cut off half one's bowels as a lesser evil to allowing them to remain. I think we cannot attribute to him so advanced a surgical mind. Is it from dread of consequences and attempt at concealment; from a fear of blame ever so ready to fall upon the smallest misadventure, avoidable and unavoidable, occurring in midwifery; knowing the extreme danger of the rupture and prolapsus, and thinking that it will make no real difference as to the final result; is it that they have determined to conceal it by extirpation?

But *does* it make any difference in the result? Is a patient sure to die with a large intestinal prolapse through a large rupture? Are there no parallel cases in which recovery has followed? Let us look at it in another light. Is there any chance of persons living deprived of half their bowels? May we not at once say No? A patient may lose a foot or two, but fifteen feet, both small and great, how can it be expected? But rupture of the uterus has been recovered from not infrequently, and so has prolapse of the bowels of large extent; and why may not a patient survive both under great care? In my own experience, I remember a woman ripping up her abdomen, and nearly all her bowels came through the opening, and were carried by her in her apron for some two or three hours. They were returned and the wound closed, and she recovered without a bad symptom, as also did the case quoted above from Cooper's Dictionary. But it may be answered, Yes, but you cannot keep the wound in the uterus or vagina closed, even if you return the prolapsed parts. No doubt it is difficult. I think the reduction of the hernia would be readily done, if the mesentery be not torn, by gently drawing down the vagina, whilst pressing the bowels through the rent. This would bring the hole below the reach of the mesentery, and virtually draw up the bowels. Pressure on the uterus from above would help, but of course great care would be required lest much displacement should occur. Some have advised stitching the edges of the rent together *in situ*; but in the case of the vagina only, if the coils of bowels were once reduced the pressing of the uterus well downward into Douglas's pouch would fill it up, and keep up the intestines. The patient should be then kept on her back rigidly for two weeks, when adhesions would be strong if she survived. But it is almost impossible to stitch *in situ*. You may, if you could, wound the intestine. If the patient were in hospital she might be placed on the table, and, the uterus being drawn down, as in some cases of operating on vesico-vaginal fistula, the edges might be sewn together; but in home practice, and in out-of-the-way places, it is nearly impracticable. If the uterus were also ruptured, it would be next to useless. Practically it generally comes to careful restoration and replacement of the edges, with absolute rest. However small the chance, it certainly is better than taking every chance away by removing half the intestines. But would restoration be impossible? I can hardly conceive it would be so. It may be tedious, but assisted by another, and also plugs, &c., it might be done. The funis is troublesome to restore, but then this is because we are afraid of using pressure sufficient to stop the circulation; in ovariotomy, even with vomiting,

it is no very difficult matter to keep the intestines in place.

I have already occupied too much of your space; but the lessons derived from such a case are so important to all practising midwifery that this must be my excuse. But I may end with one question—Of what possible use can the sojourn for six months in a prison be? Will it teach better knowledge of midwifery, or will it steady the judgment of one who already was perhaps so appalled by the fearful character of an accident for which he was possibly not blamable as to commit the rash act? If the latter, the punishment will add to the evil. If the former, it is scarcely there that knowledge will be obtained. If the error was through ignorance, then who is so much to blame, those who habitually cast a slur on the value of obstetric knowledge, and endeavour to reduce the requirements at examinations to the lowest possible point—who recommend, as I have had recommended to me, to give lectures alternate years, as if the urgencies of midwifery were worth less study than botany and the accidentally allied subjects of our profession; I ask, who is so much to blame, these or the student, who, looking at the estimate set on obstetrics by their guides as fair indicators of its value, thinks that it is a matter of only secondary importance, to be grievously undeceived by the loss of practice, *perhaps in a prison?*

I am, Sir, your obedient servant,

J. BRAXTON HICKS.

George-street, Hanover-square, March, 1875.

P.S.—I have, since writing the above, received the following from Dr. Goodhart, Guy's post-mortem room:—"A woman was examined this afternoon. She was spare of habit, and with a very retracted abdomen, so that the spine formed a prominence on the surface of the abdominal wall; and not much pressure could be exerted on the contents of the cavity. However, I made a rent in the upper part of the vagina, behind the os uteri, about three inches in length; but, with the utmost squeezing in the power of myself and one of the clerks, we were unable to do more than to make a single knuckle of small intestine appear at the osteum vaginæ. I seized this and tore it away from its mesentery without much force, and then it was easy, as in yesterday's experiment, to run the tear along the attached border of the bowel, and so to pull away a continuous string of intestine some eight feet in length. The bowel, in tearing away, elongated and contracted in its calibre; and the same thing I have repeatedly observed before when the intestines have been removed carelessly, so that it came to show as a rounded cord about the size of an ordinary fœtal funis; and it was remarked by all that it would not have been at all difficult, in a careless moment, to have mistaken it for the funis. I could not extract as much as fifteen feet in this instance, but I think that if a longer mesentery existed it would be quite possible to do so."

CROUP AND DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—After reading Dr. Semple's letter it would not surprise me to find that perhaps we all mean the same thing. If what has been meant by Sir Wm. Jenner, and those who concur with his supposed views, really only is—first, that suffocative tracheitis is often set up by diphtheria, and, secondly, that there is another grave and fatal form of suffocative tracheitis not set up by diphtheria, and distinguishable from it by certain symptoms (which is what I understand Dr. Semple to say), then I have only to reply that such has always been my conviction, and, I believe, the general conviction amongst English practitioners, who call the first set of cases "diphtheria," and the second set "croup." And I don't think I need read what Dr. Semple has written to any such effect as that, though, if he will send me a copy, I shall be happy to do so.

I had believed that there was something new in Sir William Jenner's declarations. Those who followed him evidently thought so. But, in truth, his own words are indeterminate enough. What really is in his reported lecture is this: first, he speaks emphatically of *true* croup; secondly, he says the great bulk of cases of *so-called* croup arise by extension of diphtheria from the fauces; and, thirdly, that an examination of the throat in these cases will "usually" prove this by revealing the diphtheritic membrane.

Now in all this those who believe with me would join him without any reserve, except that, besides the cases he thus well identifies as what we call true diphtheria, we should say there is a large class of cases in which you cannot see any membrane in the fauces during life, nor trace an extension from membranous sore-throat, and which die of a primary suffocative laryngo-tracheitis, which we call true croup. It will be observed that Sir William does not deny the existence of the latter disease, though he is silent as to grave cases of the sort; but his lecture is not all published, and we may find that he does not intend to throw doubt upon the occurrence of fatal membranous tracheitis not extending from the fauces. If he did so, I think his opinion would require explanation, by considering the probable effects of limitation of experience to practice among classes and in situations where children are cared for against cold, and need suffer little injurious exposure; the cases of primary suffocative tracheitis, which we call true croup, being most frequent in exposed places and in neglected children. When Sir William recognised this disease of ruder victims, as he says he formerly did, he may then have more frequently been engaged where it is to be found.

As to the view of those who, like Dr. Semple, allow that suffocative tracheitis is often fatal without diphtheria, they still leave us with a deadly croup as before, only instead of asking over the dying child, "Is this croup or diphtheria?" we are to ask, "Is there a membrane or no?" But what is the good of saying "true croup is diphtheria" if you mean that there are many fatal suffocative tracheitis cases which are not diphtheria? You only shift the difficulty in the dark. You cannot prove whether there is a membrane or not without a post-mortem examination, and how few of these are made. And I have already shown clearly enough that false membranes do form in the trachea from unspecific inflammations, so that at least I may claim that it is *doubtful* whether membranes do not arise in these inflammations; and hence to assert that they do not is *not good science*, while since such unspecific inflammations kill as croup, membrane or no, the interest as to the membrane is *only scientific*.

I have given my reasons for firmly believing that croup from exposure to cold will produce a membrane. In addition to the facts I adduced, my colleague (Dr. Fagge) has supplied me with another which occurred under his observation, and where a croupy membrane formed in the trachea in a cut-throat case. No one has shown the slightest reason for doubting that if steam, beans, cut-throat, and acid fumes will create membranous tracheitis, the irritation of severe cold will not do the same.

One word, lastly, on the mere abstract question how far the post-mortem phenomena of a disease can give evidence of distinction of kind. In dealing with living nature (dead, it is "still life"), the question of kind refers to the formative and constituent powers which give rise to the thing in question. To illustrate this proposition, for example, in pathology: a sore is called "common" or "non-specific," or, in other words, *devoid of kind*, if it arises from indifferent causes; but specific, or *endowed with kind*, only if it has a peculiar origin or source. Again, further, it requires that the constituting causes of a kind be of an obscure and unknown nature; thus, if we found a red house-fly, we should pin it up as a distinct kind, *musca rubra*, unless we knew or suspected that some rogue had painted it, when we should no longer regard it as a distinct kind. And *no mere likeness of the phenomena* of the disease would make it a *kind* of disease except by proving that it has a distinct *kind* of cause, known or inferred. Otherwise it would not be a kinded or "specific" disease at all, but a "common" or non-specific disease. It follows necessarily from this that a character common to diseased states which arise from different sources cannot be evidence of a particular kind of disease. Hence the false membrane of tracheitis which confesses five distinct sources, which I need not again recount, cannot be regarded as a proof that the tracheitis which produces it is diphtheritic or otherwise specific. On the contrary, membranous tracheitis has lost all "kind" or specific nature, and has became certainly a common and not

a specific diseased condition. It sometimes has a specific origin, but the specific nature is limited to that particular origin, and does not belong to the membranous tracheitis.

I am, Sir, yours obediently,

Finsbury-circus, March 23rd, 1875. WALTER MOXON.

SELF-SUPPORTING HOSPITAL AT BRIGHTON.

To the Editor of THE LANCET.

SIR,—It seems from a letter in your last number from Dr. Kebbell, the senior physician to the Sussex County Hospital, that the reform of our medical charities is obstructed by a difference of opinion as to the persons entitled to hospital or dispensary relief, and he indicates five separate classes, respecting each of which he asks for an opinion.

Dr. Kebbell's first two categories—domestic servants and mechanics earning less shan 30s. a week—are included in one general answer. Persons of this class cannot afford to pay even the most moderate professional fees. Combined with the diminished receipts and increased expenditure in other ways which illness entails, the "doctor's bill" crushes thousands of working-class families, and places medical practitioners in the painful position of dunning for bad debts, and rendering services which they know can never be paid for. The remedy is a small monthly payment, on the principle of mutual assurance, to obtain medical treatment in sickness; or, if this insurance has been neglected, an equivalent for it in the shape, say, of a shilling for the first, and sixpence for every subsequent attendance. One or more provident dispensaries should be affiliated to every general hospital, or incorporated with it on the Royal Albert Hospital (Devonport) plan, and a charge, say, of five shillings a week should be made on every in-patient who could afford it, on the Boston principle.

Dr. Kebbell's third category is, "persons who employ and pay a general practitioner in the country, but who are constantly going long distances by railway to get advice and medicines for nothing at some neighbouring charitable institution." This is an instance of the demoralising influence of our vast system of gratuitous medical relief. In London persons constantly pay in omnibus fare, for the privilege of waiting for hours in a crowded out-patient department, more than would secure them prompt attention for a month at a neighbouring provident dispensary, with the additional advantage of attendance at their own homes if necessary. These of course should pay in one or other of the ways above described.

The fourth class is that of "members of benefit clubs who have a regularly-appointed medical man." If members of such benefit clubs wish also to avail themselves of the skilled professional assistance at hospitals and dispensaries, by all means let them do so, but they ought not to have it for nothing. They should pay as above suggested.

The fifth and last are "the strictly pauper class, who have no regular means of subsistence, and who get parish relief." This should be decided on purely medical grounds. If the case is one which, on account of its difficulty, gravity, or other peculiarity, requires hospital treatment, it should be admitted either without payment or at the cost of the guardians; but if it is an ordinary case, it should be remitted to the parish doctor.

I am, Sir, yours, &c.,

London, March 13th, 1875. C. E. TREVELYAN.

"SPURIOUS HIGH TEMPERATURES."

To the Editor of THE LANCET.

SIR,—The importance of the temperature of the body as a means of diagnosis is so well known to the public that deception is occasionally practised without one being always alive to it. I therefore venture to relate two or three instances.

Some years ago a female patient at the German Hospital, suffering from headache and occasional hysterical attacks, accompanied with slight increase of temperature, exhibited, after a fortnight's stay in the hospital, sudden elevations to 105°, 106°, and even 107° F., at irregular intervals. One day, just before my visit, the temperature had been marked at 107°. As the pulse, however, scarcely exceeded 100, and as the skin did not feel preternaturally hot, and the respiration was likewise tolerably calm, I took the temperature again, keeping my eye on the instrument, and found it to be 99°. The same result was obtained on all the following days with the same precaution.

This patient had no doubt noticed the great interest with which the higher temperatures of other patients in the same ward were watched; she had also heard our remarks about some rare cases of transitory pyrexia in connexion with hysterical attacks, and the wish to render herself interesting naturally arose. To be a puzzle is the greatest aim of some minds.

The second case was that of a young lady who, in consequence of an affection in the upper part of the left lung, had spent three winters abroad. As the disease was perfectly quiescent, and as no fresh symptoms had occurred for two years, it was considered unnecessary that she should leave home in 1871, contrary to her expressed wish. In November, however, I was asked by her medical attendant to see her, because the temperature had been for a fortnight abnormally high—namely, between 100° and 102·5° Fahr. However, when I examined the temperature under the tongue, it was only 99°. I suggested that the temperature should in future always be taken in the mouth, mentioning at the same time that it would be imprudent to let her travel in a feverish condition. From this day the temperature never rose above 99·2°.

In the third case a lady, who had had intermittent and remittent fever in India and in Rome, was said to have a relapse of her old complaint, having every afternoon and evening severe shivering, followed by great heat (104·5° to 106°). When I visited her during the pretended attacks, I found the spleen not enlarged, the skin not hot, the pulse only 95, and the temperature in the mouth 99·2°, after having been found to be 105° in the axilla a quarter of an hour before my arrival. After this the temperature was always taken in the way described, and the fever kept away, although no special remedies were used.

I cannot say how in these cases the fictitious temperatures were produced—whether by hot flannels or hot bottles, or other means. The heroes of Egyptian Hall or those of the spirit-rapping *séances* could, I have no doubt, find various means. Friction of the bulb will produce some rise. A very thin bulb might possibly be compressed, but not that of an ordinary thermometer.

Whenever there is cause for suspicion from the contrast between the alleged temperature and the other signs—viz., pulse, respiration, and state of skin,—the temperature ought to be taken in the mouth or rectum, and the eye and hand of the medical man ought to be on the instrument.

I am, Sir, your obedient servant,

HERMANN WEBER.

Grosvenor-street, Grosvenor-square, W., March 12th, 1875.

"DEATH BY STARVATION IN PRISON."

To the Editor of THE LANCET.

SIR,—Under the above heading you comment in your issue of the 20th inst. on the death of a poor girl who died in the hospital, to which she was transferred from the prison. I beg to state for your information that an official inquiry was held by the coroner before Her Majesty's Attorney-General into the circumstances of the case, and after a careful investigation the jury returned a verdict of "Death from natural causes."

I was the medical officer who attended at the inquest, and never made use of the word "debility," so freely made use of and commented upon by some of the writers in the Jersey papers, so that the "debility" or starvation theory, out of which so much capital has been made, is entirely due to the imagination of the writers of these papers. The girl's death was solely attributable to congestion of the lungs, and the "half-a-pint of water" allowed in twenty-four hours is also one of the inventions had recourse to in order to write sensational articles upon the death of this unfortunate waif, who passed her life either in begging or stealing; this being, I may add, the third time she appeared on a charge of theft; and the bread-and-water diet she had whilst

she was in prison was very probably a more regular and substantial meal than she was in the habit of getting. Without entering more at length into the circumstances of the case, I may be allowed to state that H.M. Attorney-General, whilst condemning the bread-and-water diet, found nothing whatever in the other circumstances relating to the treatment of this girl during her confinement to warrant any interference on his part, which he would most undoubtedly have offered had the deceased suffered the cruel and inhuman treatment so much spoken of.

Lastly, the girl was visited by the medical officer of the prison, and died twenty-four hours after her admission into the General Hospital, and her body, far from being emaciated, was very fairly nourished.

I remain, Sir, your obedient servant,

Jersey, March 25th, 1875. AMIRAUX GODFRAY.

*** We are sorry that Mr. Godfray's letter does not give us more details of the nature of the illness in this case, of the amount of medical attention given to it, and of the modification of the bread-and-water diet ordered by the medical officer in favour of a dying girl. Mr. Godfray seems, indeed, to admit that this was the only food, and so much better than her ordinary diet as to be good enough. We greatly regret that Mr. Godfray should even appear to defend such a diet in such a case. The fact that he does so is most serious. Notwithstanding his letter and the verdict of "Death from natural causes," the case is one that needs further investigation, and will, we trust, be brought under the notice of the Home Secretary.—ED. L.

UNQUALIFIED SHIP-DOCTORS.

To the Editor of THE LANCET.

SIR,—With regard to the subject which you permitted me to introduce to the readers of THE LANCET on the 13th inst.—viz., medical men practising afloat whose names are not registered as required by the Medical Act of 1858,—I see that the honourable member for Gravesend has asked for a return of the number, ages, and nationalities of persons who have served in the British Merchant Service during the last two years as surgeons, whose names do not appear in the Medical Register.

If I understand the purport and intent of the Medical Act of 1858, all those persons whose names do not appear in the Medical Register, which is compiled under authority as a public index and reference, are, *ipso facto*, persons not duly qualified, and by the same Act no other persons than those whose names are registered are permitted to grant certain certificates; but it is notorious that persons other than registered and qualified persons have been permitted to grant certificates, and such certificates have been, and are, received precisely as if such certificates were genuine and valid documents; am I not, therefore, entitled to ask, "*Quis custodiet ipsos custodes?*"

To me, as a master mariner, to whose care large numbers of persons are being constantly entrusted, among whose ranks an epidemic may at any time break out, it is a question of the gravest importance that all irregularities shall be made impossible, and I maintain that the Board of Trade is guilty of a gross dereliction of duty, since wherever I seek information on this subject, either in Liverpool or London, the very politest reply that I receive is a shrug of the shoulders, which pantomime I have not as yet been able to interpret. I therefore intend to practically raise the question by refusing to allow any medical man to sign my articles as a "seaman" whose name is not to be found in the Medical List, which act will at once raise the question in such a practical way as will at once expose the gross abuse.

I am, Sir, yours, &c.,

March 23rd, 1875. A SHIPMASTER OF 1843.

MR. C. YEATMAN has given £100 to the Endowment Fund, and £50 to the Building Fund, of the Boston Cottage Infirmary.

THE COLLEGE OF SURGEONS.

AT a meeting of the Council of the Royal College of Surgeons of England, held on Wednesday last, some important matters bearing on the Conjoint Examination Scheme were discussed. A report was received from the President on his interview with the President of the Royal College of Physicians, respecting the resolutions accepted by the Council on the 14th of January last as a basis for conference with the other authorities co-operating for a Conjoint Scheme.

At the same meeting, on the motion of Sir James Paget, a Committee was appointed to consider and report to the Council on the best means of giving effect to the new bye-laws ordained by the Council on Dec. 10th last, relating to Examiners and Examinations in Anatomy and Physiology.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on March 18th:—

Evans, Thomas, Pwllheli, North Wales.
Hallowes, Miller Coleman, Devonshire-street, Islington.
Houlbrook, Edward, Caius College, Cambridge.
Morris, George, St. Mary's Hospital, Manchester.
Paxon, Herbert Elliott, Dorking, Surrey.
Pettigrew, Augustus Joseph Walford, Warwick Villas, Hounslow.

The following gentlemen passed the Primary Professional Examination on the same day:—

James Brett, Birmingham; Alfred Chas. Parker, Guy's Hospital; Arthur William Prichard, Bristol Hospital; William Henry Smith, St. Mary's Hospital; Edmund Geo. Carruthers Snell, London Hospital.

FOOT-AND-MOUTH DISEASE has, it is stated, broken out with great violence over the whole of Sutherlandshire.

DR. STRONG, Croydon, has been elected Vice-president of the Royal Masonic Benevolent Institution for aged Freemasons and widows of Freemasons of Croydon.

THE Corporation of Dublin, in view probably of the high death-rate of the city, and convinced of the necessity of doing something in a sanitary direction, have resolved to apply to the Government for a loan of £500,000 to carry out the proposed drainage works, with power to rate the Castle and other Government buildings towards the payment of the loan. The works are expected to be completed in five years.

Medical Appointments.

ANDREW, H., F.R.C.S.E., has been appointed Medical Officer of Health for the Truro Urban Sanitary District: £30 for one year; acreage 1103; population 10,899.

BALLANTYNE, A., M.D., L.R.C.S.Ed., has been appointed Medical Officer to the Dalkeith Union Poorhouse, vice Thomson, deceased.

BARNES, J., M.R.C.S.E., has been reappointed a Surgeon to the General Infirmary, Sheffield, upon the expiration of his seven years' term of office.

BARLOW, T., M.D., M.R.C.P.L., M.R.C.S.E., has been appointed Assistant-Physician to the Hospital for Sick Children, Great Ormond-street, vice Gee.

BARTOLOMÉ, M. M. DE, M.D., has been reappointed a Physician to the General Infirmary, Sheffield, upon the expiration of his seven years' term of office.

CAMERON, C. A., L.K.Q.C.P.I., F.R.C.S.I., has been appointed Professor of Chemistry at the Royal College of Surgeons, Ireland, vice Reynolds, resigned.

CHAMBERS, J., M.D., C.M.Q.U.I., has been appointed Professor of Anatomy in the Indiana Medical College, Indiana State University, U.S.A.

CHRISTOPHER, W., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the East Budleigh District of the St. Thomas Union, Exeter.

COLMAN, T. J., M.D., M.R.C.S.E., has been appointed Medical Officer for No. 3 District of the Clifton Union, vice Fendick, resigned.

DICKSON, H., M.B., has been appointed Assistant Medical Officer to the Bristol Lunatic Asylum, Stapleton, near Bristol, vice Draper, appointed Medical Officer to the Redditch and District Medical Association.

DOBELL, H. B., M.D., M.R.C.P.L. (for sixteen years Physician), has been appointed a Consulting Physician to the Royal Hospital for Diseases of the Chest.

EVANS, W. H., M.R.C.S.E., L.R.C.P.Ed., L.M., has been appointed a Surgeon to the St. John's-wood and Portland-town Provident Dispensary, vice Britton, resigned.

FAUSSETT, J. D., L.M. & S. T.C.D., has been appointed Assistant Medical Officer to The Friends' Retreat, near York, vice Widdas, resigned.

GEE, S. J., M.D., F.R.C.P.L., Assistant-Physician, has been appointed a Physician to the Hospital for Sick Children, Great Ormond-street, vice West, whose term has expired.

HAYDEN, W. G., L.R.C.P.I., M.R.C.S.E., L.M., has been appointed Medical Officer to the Workhouse, Wycombe Union, vice Bowstead, resigned.

HENRY, G. F., L.R.C.P.Ed., L.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Westoe District of the South Shields Union, at an increased salary.

HUNT, W. C., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Bramford-Speke District of the St. Thomas Union, Exeter.

KIRKPATRICK, J. R., M.B., F.R.C.S.I., L.K.Q.C.P.I. has been appointed Medical Officer to the County Dublin Prison, Kilmainham, vice Thornhill, deceased.

MERCER, E., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Colaton-Rawleigh and Otterton Districts of the St. Thomas Union, Exeter.

MORRIS, D. W., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer of Health for the Oystermouth Urban Sanitary District: £30 per annum; population 5000.

MUDGE, B. H., M.R.C.S.E., has been appointed Public Vaccinator for the Western District of the Redruth Union, vice James Mudge, M.R.C.S.E., resigned.

PAGE, D., M.D., has been appointed Medical Officer of Health for the Grange Urban Sanitary District: £5 per annum.

POTTS, E., M.R.C.S.E., has been appointed Resident House-Surgeon to the Southport Infirmary, vice Coombe, whose appointment has expired.

PRIOR, C. E., M.D., F.R.C.S.E., has been appointed Medical Officer of Health for the Bedford Rural Sanitary District: £210 for one year.

PUDDICOMBE, E. M., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Rewe District of the St. Thomas Union, Exeter.

RUCKLEY, H. R., L.R.C.P.Ed., L.M., L.R.C.S I., has been appointed Medical Officer and Public Vaccinator for No. 3 District of the Wycombe Union, vice Bowstead, resigned.

SHEPHERD, W., M.D., has been appointed Medical Officer and Public Vaccinator for the Parish of Forteviot, Perthshire, vice Young, resigned.

SMYTH, H., M.B., has been appointed Medical Officer and Public Vaccinator for No. 2 District of the Poole Union, vice Crabb, deceased.

STRICKLAND, F. G., L.R.C.P.Ed., has been appointed Medical Officer to the Southowram District of the Halifax Union, vice Nowell, resigned.

WAUGH, J., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Toddington District of the Woburn Union, vice Hicks, resigned.

WELCH, J. B., M.B., M.R.C.S.E., has been appointed Medical Officer of Health for the Handsworth, Staffordshire, Urban Sanitary District.

WHARTON, J. H., F.R.C.S.I., L.K.Q.C.P.I., M.B., has been appointed a Director of the Cow-Pox Institution, Dublin, vice Adams, deceased.

WILLIAMS, R., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the No. 2 District of the Leominster Union, vice Chattaway, deceased.

Births, Marriages, and Deaths.

BIRTHS.

DREW.—On the 19th inst., at Gower-street, the wife of Walter H. Drew, M.R.C.P., M.R.C.S., of a son.

LANCHESTER.—On the 14th inst., at Park House, Croydon, the wife of H. T. Lanchester, M.D., of a son.

MARSHALL.—On the 17th inst., at Mitcham, the wife of Edward Marshall, M.R.C.S.E., of a son.

PERRY.—On the 18th inst., at Queen's-terrace, Glasgow, the wife of Robert Perry, M.D., of a daughter.

SMITH.—On the 12th inst., at Park-gate, Rotherham, the wife of W. J. Smith, L.R.C.S.Ed., L.R.C.P.Ed., L.S.A.L., of a son.

SWANSON.—On the 18th inst., at Lawrence House, York, the wife of George Isles Swanson, M.D., of a daughter.

WALLIS.—On the 16th inst., at Bexhill, the wife of F. M. Wallis, M.R.C.S.E., of a son.

MARRIAGES.

DAVY—COUSINS.—On the 13th inst., at the Parish Church, Croydon, Francis Arthur Davy, M.D., Staff Surgeon Army, to Florence Amy, daughter of Charles Cousins, Esq.

LITHGOW—MURRAY.—On the 16th inst., at St. Jude's, South Kensington, Robt. Alex. Douglas Lithgow, L.R.C.P.Ed., to Emily Mary, daughter of Sir Robert Murray, Bart.

DEATHS.

BEATTIE.—On the 17th inst., Wm. Beattie, M.D., of Upper Berkeley-street, aged 82.

BOULTON.—On the 15th inst., Barnard James Boulton, M.D., of Horncastle, aged 71.

HEMINGWAY.—On the 17th inst., Henry Hemingway, Surgeon (in practice prior to 1815), of Dewsbury, aged 85.

MAY.—On the 15th inst., Henry Storme May, M.D., of Summerlands, Exeter, aged 86.

MOLONY.—On the 21st ult., at Stoney-hill, Golden-spring, Jamaica, Dr. J. F. Molony, formerly of Ennis, Co. Clare.

RALFS.—On the 12th inst., Samuel Ralfs, L.R.C.P.Ed., of Turnham-green.

SMITH.—On the 17th inst., Henry Bennett Smith, M.R.C.S.E., of Walkern, Herts, aged 77.

SMITH.—On the 12th inst., John Smith, M.R.C.S.E., of Alford, Lincolnshire, aged 75.

TAYLOR.—On the 19th inst., Dr. James Taylor, of Viewenig House, Aberdeen, aged 84.

WATSON.—On the 15th inst., at Morningside, Edinburgh, Robert Watson, L.R.C.S.Ed., Surgeon-Major late 18th Royal Irish.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

A FRENCH VIEW OF AMERICAN DIPSOMANIAC ASYLUMS.

WITH the increase of intemperance in France, there have arisen attempts to restrict it, and M. L. Simonin records, for the benefit of his countrymen, his experience of the system in force in the Dipsomaniac Asylum in Ward Island, New York. As to the necessity for such measures in the United States there can unhappily be no question. In Maine, where the Legislature has shown itself so keenly alive to the prevalence of the vice, there were in 1873 as many as 18,000 inebriates out of a population of 630,000. Restrictive enactment has merely driven the drunkard to ingenious devices for gratifying his propensity; and, according to medical statistics, the cases of delirium tremens have been quadrupled in Maine since its celebrated Liquor Law. The "bold bacchanal" is now a hero to be admired in New York, where the "four-bottle man" is looked up to as his prototype used to be during the Regency in England; while so general has the tippling habit become that physicians trace to it not only the greater frequency of apoplexy, but those epidemics of sun-stroke which have prevailed in some large American towns these last few summers. Our readers already know of the establishment of the Dipsomaniac Asylum in Ward Island in 1864; how provision was made in it for accommodating all classes, rich and poor; how the inmates are divided into two classes, the voluntary and the penal; and how the first of these is subdivided into three groups, who pay for aliment 14 or 8 or 3 dollars a week, according to the scale of the three classes of hotels. The 14 dollar inmate may live luxuriously, everything being provided except intoxicating liquor. He may have a private room, and live with his wife, where she has been courageous enough (the thing has happened) to share his seclusion. The voluntary patients arrive in all conditions—helplessly drunk, or in a state of delirium tremens, or under the coercion of friends; and their first day of entire abstinence is generally one of extreme prostration. So low are they sometimes that the physician allows a little spirit in the form of punch or a rum-omelette, and gradually reduces them to a non-alcoholic diet. In spite of every effort to amuse them, they look unutterably listless and *ennuyé*. All self-respect has gone, and they bear the scrutiny of visitors unabashed and unconcerned. Billiards, books, splendid promenades, have no attractions for them, and they often try to escape. This they sometimes effect; but are easily brought back from the nearest bar. In 1871, out of 1718 patients, 109 escaped. The non-voluntary inmates are more contented, because they are made to do work; but even they try to get out. M. Simonin found that the system had failed to satisfy its promoters, some of whom, accordingly, wanted to give it up; but it was argued that it had not got a fair trial, and so the Ward Island Asylum is still in operation. The women have now been separated from the men, and occupy a special establishment in Randal Island. One practical objection to both institutions is that they do not pay. The yearly expense for the Ward Island Asylum is 40 per cent. in excess of the income from the voluntary patients. All these facts, M. Simonin thinks, must be considered before the adoption of the system in France. He is sceptical as to the permanence of the drunkard's cure, and hardly knows a case in which the habit has been conquered, except by that effort of will which can be put forth as well at home as in a dipsomaniac asylum.

Dr. E. C. Mees.—The paper has been published.

PROFESSIONAL ETIQUETTE.

To the Editor of THE LANCET.

SIR,—In reply to Dr. Hassall's "demand," I have to say that the gentleman to whose case he refers was brought to me for consultation more than a year ago by Mr. Plunkett, of Knightrider-street, who is a very old friend and medical attendant of the family. Since that time the patient has been under our joint care, and in all matters relating to his health he has been guided by our advice. When a few weeks ago we sent him to Bournemouth, I wrote to Dr. Falls, giving him a history of the case, and requesting him to take charge of the patient during his stay there. After a time, when a farther change appeared to be required, Mr. Plunkett and I advised our patient to go to Ventnor, and we agreed to ask Dr. Whitehead to undertake the case. In consequence of a mistake, for which I am not responsible, the patient was not informed of our choice of a medical attendant for him at Ventnor until after his arrival at that place. Meanwhile, Dr. Falls, not being aware of our intentions respecting this important question, had written to Dr. Hassall. The result of this misunderstanding was that the patient passed for a few days under the care of that physician.

I can understand Dr. Hassall's disappointment on learning that those with whom alone rested the grave responsibility of selecting a medical attendant for their patient had chosen another practitioner; but, in my opinion, he has shown but little self-respect by the anger displayed, first, when the patient's youthful son called on him to explain the circumstances, afterwards in his encounter with me at the railway station, and, lastly, in the columns of THE LANCET. When Dr. Hassall assailed me on the railway platform with vehement threats of an appeal to public opinion, I advised him, before invoking such aid, to ascertain all the facts of the case; and I cannot but think that if he could have restrained his impetuous wrath sufficiently to enable him to act upon my advice, he would have occupied a less conspicuously undignified position than that in which he has now placed himself.

I am, Sir, your obedient servant,

Savile-row, March 20th, 1875. GEORGE JOHNSON.

A ROMAN MADHOUSE.

THE Santa Maria della Pietà, according to the elaborate report just prepared by Drs. Solivetti, Fiordispini, and Solfanetti, under the editorship of the Cavaliere Girolami, superintendent of the hospital, contained at the close of 1873 a total of 587 lunatics—302 being men and 285 women. The mode of treatment is a signal improvement on that in vogue under the Papal *régime*. Patients who were formerly secluded are now, thanks to the increased number and vigilance of the attendants, seen walking in safety to themselves and others through the airing-grounds, or busily and profitably employed in weaving, sewing, cabinet-making, and cobbling. Beyond the precincts of the asylum itself are the magnificent villas on the Monte Janiculans, where patients of a higher class are domiciled, and in whose spacious gardens the inmates of the hospital itself are permitted to stroll under the eye of the Cavaliere Tommosini and his assistants. Classified under the two great heads of "physico-organic" and "physico-moral" cases, the admissions for the years 1872-3 were 278 males and 170 females. Of the men, 127 were sent out cured, 39 improved, while 30 died, leaving 82 under treatment. Of the women, 73 were cured, 7 improved, 24 died, and 66 remained in hospital. These figures speak volumes for the care and skill which have accompanied the new mode of treatment, substituting as it does for the gloom of the prison-house, the light and comfort of the home, and resulting in relief or even cure where formerly recovery was hopeless, and improvement rare.

Ignoramus.—1. There is no universal rule on the subject. The custom of the place must be considered.—2. There is no ineligibility to a guardianship, we believe, attaching to C. in consequence of his partnership, partners being respectively medical officer and deputy medical officer, inasmuch as partners are not appointed as such, or jointly, to parochial offices.

CROUP AND DIPHTHERIA.

WE regret we cannot find space for several contributions towards the controversy on this subject now going on in our columns.

Mr. C. S. Webber.—Pharmacie Mariani, 41, Boulevard Haussmann, Paris.

THE BIRMINGHAM MEDICAL INSTITUTE AND HOMŒOPATHY.

To the Editor of THE LANCET.

SIR,—The question which has been raised in regard to the propriety of admission of homœopathic practitioners to the library of the Birmingham Medical Institute, and the museum, if there should be one, does not admit, I think, of the simple solution that Mr. Chesshire imagines. He relies very much, as do many others, upon the fact that the embryo homœopath obtains his diploma by satisfying "allopathic" examiners of his sufficient knowledge of medicine and surgery to entitle him to practise, and he assumes that, therefore, he is bound for ever in honour to practise in accordance with the principles his examiners entertained. (I am afraid the desertions have been numerous even outside the sect in question.) The law, as embodied in the Medical Act, does not seem to hold such opinion, and has consequently, in dealing with punishments for unprofessional conduct, specially provided that "*the name of no person may be removed from the Register on the ground of his having adopted any theory of medicine and surgery.*" And I presume it is out of respect to the law that no attempt is ever made by the examining bodies to discover whether, among the mass of young men who present themselves, there does not lie concealed a disciple of the *one* surviving dogma of the many ludicrous dogmas promulgated with such extraordinary audacity and disregard to patent facts by Hahnemann, "Similia similibus curantur."

So far as I can discover from an examination of the utterances of homœopaths in the published reports of their annual congresses, their practice is rapidly undergoing change, and assuming the form of eclecticism. The cry, it is true, is for more "similars"; but the answer is that in France, Germany, and Austria the zeal for "provings," new and old, is dead; also that the number of practitioners in England is not increasing, being less than 300, while in the foreign countries named there is a decrease. Let me append a few extracts:—"We contend," says Dr. Dudgeon, "we are ready and anxious to adopt every means whereby that object (the cure of disease) may be attained." "There is a great danger of utter stagnation in the matter of the development of our therapeutics throughout Europe." "The hindrances," says Dr. Hale, "to the advance and recognition of our mode of practice are now more likely to exist within our own ranks." "Most of us will, I am sure, confess that a more satisfactory and rational principle in the application of our remedies is to be sought for."

I am forced to the conclusion that the two contending parties have unconsciously been working in a direction that tends to obliterate the distinctive line of demarcation which separates them, and the time is not far distant when the title homœopath will cease to exist; and that we may, without fear of consequences other than beneficial, freely permit "our friend the enemy" to pursue his studies and investigations in our public libraries and museums, which should be the homes and sacred resting-places of all who seek to advance knowledge and benefit mankind.

I am, Sir, yours &c.,

Birmingham, March 16th, 1875. F.R.C.S.

To the Editor of THE LANCET.

SIR,—The moderate and conciliatory tone of the article on the above subject in to-day's LANCET encourages me to write in the hope that you will, in your next issue, insert this letter as a disclaimer on the part of myself and a large number, if not a large majority, of the medical men practising homœopathically in this country.

I can assure you, Sir, that we do not wish to practise as "professed homœopaths," nor do we wish to "assume a mode of *practice*" or "maintain a *name* calculated to mark us from the general body of the profession"; in fact, we object to both these distinctions.

The separation and isolation under which we now suffer, and against which we protest, has been forced upon us. We have not separated ourselves from the general body of the profession; it is the majority that have turned us out, kicked us away, and that because we have dared to believe the testimony of our senses—viz., that under certain circumstances drugs act as "specifics," and that when they so act a less dose is effective than when they act otherwise (which we do not deny that they do). This is the whole "head and front of our offence." It is the majority that have "marked us from the general body of the profession" by branding us with foul names, and excluding us from professional intercourse and the societies of the profession. Let the majority withdraw these exclusions, and cease branding us with foul names, and, as equally educated, qualified, and jealous of the honour of the profession with themselves, allow us to practise according to the best of our judgment (and where we err teach us better), and all distinctions, at least on our part, will soon disappear.

I am, Sir, yours truly,

Liverpool, March 20th, 1875. JOHN W. HAYWARD, M.D.

To the Editor of THE LANCET.

SIR,—Will you allow me to call Mr. Chesshire's attention to the 23rd clause of the Medical Act, which is as follows:—

"In case it shall appear to the General Council that an attempt has been made by any body, entitled under this Act to grant qualifications, to impose upon any candidate offering himself for examination, an obligation to adopt or refrain from adopting the practice of any particular theory of medicine or surgery, as a test of admitting him to examination, or of granting him a certificate, it shall be lawful for the said Council to represent the same to Her Majesty's most Honourable Privy Council, and the said Privy Council may thereupon issue an injunction to such body so acting, directing them to desist from such practice; and in the event of their not complying therewith, then to order that such body shall cease to have the power of conferring any right to be registered under this Act so long as they shall continue such practice."

Now, Sir, Mr. Chesshire treats those physicians who act upon the legal right thus guaranteed them by the State as if they were committing an unlawful or an immoral act. For my own part, I conceive that Mr. Chesshire's view is not only contrary to law, but contrary to common sense and to morality. To what does his letter amount? In point of fact, he says *a man passing the examination of a College or University is bound ever after to practise medicine or surgery according to the views held by the examiners of the time when he is examined.* The law, as I have shown above, is clearly against his view. A very little reflection will show that, as regards the morality of the thing, his view is simply absurd. There are many physicians still practising who were examined when bleeding and blistering were the commonly accepted modes of treatment. Are they acting immorally in still holding their diplomas, though they have changed their practice?

It is time, Sir, that medical men should allow that there is no such thing as orthodoxy or heterodoxy in medical science, and that every man shall have full liberty to propound and freely discuss any theory he may believe in and have wit enough to defend. To curtail the perfect liberty of physicians to practise according to their convictions is an interference with freedom of thought and action not to be tolerated in this century, and an attempt to coerce their brethren is a disgrace to those members of the medical profession who seek to enforce the adoption or rejection of new theories or doctrines by any other means than those of free discussion in their Societies and journals.

I remain, Sir, yours &c.,

WILLIAM BAYES, Extra-L.R.C.P. Lond.

Brook-street, W., March, 1875.

F. S. P.—There is no such body as the University of Paris. The University of France is the great institution which governs the whole work of education, both the highest and the most elementary, for the whole country. The Minister of Public Instruction is at the head of this University. It is divided into about twenty territorial sections, called Academies, which are each governed by a Rector. Every Academy has three or four Faculties—Letters, Sciences, Law, and Medicine. There are only three Faculties of Medicine—Paris, Montpelier, and Nancy. No foreigner, whatever his qualification, can practise medicine in France without passing certain examinations, or obtaining a licence from the Minister of Public Instruction. To obtain a French diploma it is necessary to undergo a series of five examinations before a Faculty and to defend a thesis. All the examinations may be passed within a certain number of weeks.

Auscultator.—The last edition of the Diagnosis is No. 3.

NOTES ON A RECENT OUTBREAK OF DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—Immediately following the break-up of the severe frost in December, 1874, diphtheria broke out in a school of which I have medical charge. There are about 140 girls in this school or home, of all ages up to seventeen years. The children live in this home, and many remain several years. After a careful examination, the drains were found perfect, the waterclosets sweet and well attended to. In the play-ground there was a well, where the surface water collected, and had become stagnant. This well had not been interfered with for several years, and a dark, fetid sediment, more than a foot deep, had collected at the bottom. A quantity of surface water at the break-up of the frost stirred up this sediment, and hence the outbreak of the diphtheria. The well was thoroughly emptied, disinfected, and filled up. One night, during the process of emptying, diarrhœa attacked almost every inmate of the home. During the epidemic nine cases were removed to the temporary infirmary extemporised in the same building. The whole of the nine cases recovered. One suffered from the characteristic paralysis of the fauces. The treatment was simple, and consisted of rigidly adhering to the following rules:—1st. On the first appearance of diphtheria, the child was at once removed and isolated; a warm bath was given, followed by a calomel purge. 2nd. The child lay in blankets in a nice, airy, well-ventilated room. The throat was mopped out with spirits of turpentine in the morning, and with tincture of steel in the evening. This application it was not found necessary to repeat after the first day. The medicine was a mixture of tincture of muriate of iron with chlorate of potass. 3rd. A good supply of ice, milk, and beef-tea; port wine, brandy, and eggs in some cases were resorted to. 4th. Under Providence, I consider the success was due to the cases being taken early, good nursing, and to the separation of the cases. Six weeks have elapsed, and we have had no fresh cases.

Yours &c.,

Harrow-road, March, 1875. W. V. LYLE, M.D.

STRUCTURE OF THE EJACULATORY DUCTS.

MM. ROBIN and CADIAT (*Robin's Journal de l'Anatomie*, March, 1875) state, as the result of their microscopic observations, that the ejaculatory ducts and utriculus prostaticus, or utérus mâle of Weber, belong to the same anatomical system, and are imbedded in a compact layer of elastic and cellular tissue, which separates them from the prostatic tissue. The verumontanum is itself composed of thin elastic and cellular tissue, and none of the prostatic tubes run into it. Each ejaculatory duct has, in addition, a separate sheath of circular fibres, the outer layers of which become confused with those of the general elastic system. There is also a thin layer of contractile elements in the form of muscular fibre-cells. The mucous membrane is inseparably continuous with the layers surrounding it, so that it is not movable upon them, and it contains no glands. It presents alveoli on a surface view in adults, but is perfectly smooth in infants. The ducts are lined by a layer of columnar epithelium.

Inquirer, (Adelaide, South Australia.)—Professional feeling in this country requires consultants to refuse to meet homœopaths in consultation, and properly so, unless for some very urgent surgical purpose. This feeling is so strong that if an eminent man were known frequently, or in ordinary cases, to meet homœopaths, he would be little consulted.

ILKLEY WELLS.

WE understand that the well-known sanatorium at Ilkley has at length passed out of the possession of the homœopaths into that of a well-known practitioner of Bradford, Dr. Leeson.

THE PROFESSION IN THE UNITED STATES.

To the Editor of THE LANCET.

SIR,—Will you be kind enough to inform me, through the columns of THE LANCET, what are the features of the British Registration Law? There is so little protection thrown around the medical profession in this country that we wish to have enacted some wise laws that will not only put a stop to the arrant quackery that now runs riot in our midst, but also protect ourselves and the community. Please give us the law as much in detail as possible, and in as early a number of THE LANCET as you can, as our State Societies meet in May, as well as the American Medical Association, and this subject of legalising the practice of medicine and surgery will be brought up at both meetings, and committees will be appointed to prepare memorials on the subject to the different State Legislatures. We want to get the best law framed we can find, and the more light the better.

Fraternally yours,
Trenton, N.J., U.S.A., Feb. 23rd, 1875. D. WARMAN, M.D.

*** We are sorry that we cannot assure Dr. Warman that we possess a Medical Act thoroughly worthy of imitation. Still, bad as the state of matters is with us, it is yet worse in the United States. We have nineteen licensing bodies here, who examine with various degrees of efficiency, and give their licences at various prices, from £5 up to £22 or more. These bodies are supposed to be subject to the control of the General Medical Council, in which they are all represented. The Council issues recommendations as to medical education and the mode of conducting examinations; but as it is composed of the representatives of the nineteen different bodies, *plus* six members nominated by the Crown, it acts very gently and considerately towards the examining boards. As regards the protection of the medical profession afforded by the Medical Act, it is of the most meagre and unsatisfactory description. The Act professes, not indeed to protect medical men, but to guarantee them two advantages. First, to give *them* only—viz., medical men possessed of the qualifications given respectively by the nineteen examining bodies—the right of using medical titles; and, secondly, to give them power of recovering in a court of law for medical and surgical services, according to the nature of their diplomas, each of which is, legally speaking, either a surgical qualification or a medical one. The legal evidence of the possession of qualifications carrying these privileges is the Medical Register. For medical registration a fee of £5 is paid. Registration is not absolutely compulsory; but it is necessary for all public appointments, and, as we have said, is the only legal evidence of the necessary qualifications. Theoretically, then, perhaps we are as well off as in this democratic age we can hope to be. But, in practice, the law does not even secure these advantages with any certainty, or the punishment of quacks. Any quack may give advice and, for that matter, medicines; but, theoretically, he may not call himself Doctor, Surgeon, Physician, or any other title implying registration or recognition by the law as a medical man. But every now and again a crotchety magistrate is found who does not see his way to convict men using titles falsely, or on the strength of a bought diploma, and constantly a general practitioner is baulked in attempts to recover because his qualification, though legal, does not apply to the nature of the particular case for which he seeks to recover. What medical reformers aim at here is a reduction in the number of competing examining bodies, a complete qualification system, and a clause more expressly defining the sacredness of all medical titles, and more expressly providing for the punishment of those who falsely use them. One difficulty in this subject is the treatment proper to be awarded to foreign diplomas. Theoretically we should be liberal. It is pleasant to be so. But seeing the utter worthlessness of many foreign diplomas, and the want of control which a country can exercise over any other diplomas than its own, it is well to either entirely ignore foreign qualifications, or to give a discretionary power of recognition to a body, such as our Medical Council, competent to discriminate between respectable examining bodies and those which are not respectable.—ED. L.

FEMALE DOCTORS AND "L'UNION MÉDICALE."

M. RICHELOT has published a series of powerful articles in the above-mentioned paper, wherein he shows the fallacy of the arguments of those who advocate the medical education of women. He points out very forcibly the part which women are intended by nature to perform in the world, and proves that they are unfit for the hardships and anxieties of practice. Their usefulness as wives and mothers is set forth in glowing terms, and in the course of his remarks the author often refers to some ladies who are practising in London. The latter, taking advantage of slight inaccuracies in M. Richelot's statements, have entered the field, and a letter from one of them was courteously inserted in *L'Union Médicale*. But the valid objections stand unanswered, and the intrusion of women into professional life must ever be regarded as a mistake.

A. B., (Dublin.)—The supervision of the laws relating to local government, the public health, and the relief of the poor in Ireland, is vested in the Irish Local Government Board.

Naval Surgeon.—We must refer our correspondent to an article which appeared in THE LANCET of Feb. 13th for our opinion of the new Warrant.

Audi Alteram Partem should address his defence to the journal in which his conduct has been criticised, if he thinks its criticisms worth notice.

THE LATE MR. MERRYWEATHER.

To the Editor of THE LANCET.

SIR,—Will you permit me to say a few words in support of the powerful appeal made by Dr. Hare in your journal of the 13th instant on behalf of the wife and family of the late Mr. Merryweather.

In the case of a similar appeal on behalf of the family of a deceased medical man, it was urged in derogation of their claims that there had been great improvidence; that during the husband's lifetime the lady and her children were the most expensively dressed persons in the neighbourhood.

Having known poor Mr. Merryweather very intimately during the whole of his professional life, I can bear testimony to the fact that both as to their personal and domestic expenditure he and his wife were alike most careful and economical; and this not only in later years, when owing to his frequent illness his income had become reduced, but also at a time when his practice was good, and his prospects such as might fairly have justified a larger expenditure. I am, Sir, your obedient servant,

JOSEPH SEATON, M.D.

Halliford House, Sunbury, S.W., March 23rd, 1875.

An Intending Candidate.—The competitive examinations are over for the present. We would recommend our correspondent to compete for the Indian medical or naval medical services, in preference to that of the British army, the medical officers of which are loud in their complaints as to the policy that has been adopted in regard to them.

Mr. C. Lucas Smith should consult some medical practitioner, as it will depend upon the nature and causes of the affection whether it can be removed.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—In the report of the meeting of the Pathological Society on Tuesday last, in to-day's LANCET, speaking of certain growths found in the interior of ovarian cysts which I was describing, I am made to say they are commoner than Dr. Wilson Fox thinks. I said just the reverse; but I think he has represented it as commoner than it is, for I have only seen two examples of it in more than one hundred tumours. Will you kindly correct this in your next issue, and oblige, Yours obediently,

J. KNOWSLEY THORNTON.

Park-street, Grosvenor-square, March 20th, 1875.

Psychologist.—An important accession to the scientific study of mind has just been made by M. Antoine Cros in his treatise entitled "Les Fonctions supérieures du Système Nerveux" (Baillière, Paris). Commencing with the study of sensation, he shows nerve-excitation to be the first condition of sensorial perception; then follows a rapid outline of the physiological theory of this sensibility considered as a general property of existence, and finally he examines in succession what he calls impressive sensibility, conceptive sensibility, and affective sensibility—each of these divisions corresponding to a particular region of the nervous system. On this basis he constructs a physiological theory of thought, which he applies to the study of man's mental functions. M. Cros maintains that all intellectual manifestations are mutually connected by a "puissance de co-ordination," identical with what is called "freedom of the will."

Auriet, (Brussels.)—We are not acquainted with any official document of the nature referred to, with the exception of the regulations for the medical examination of recruits, respecting which our correspondent should apply to the War Office, Pall-mall.

Mr. N. Cassado.—Consult any respectable medical practitioner. Avoid advertising quacks.

MEDICAL PRACTICE IN SOUTHERN EUROPE.

To the Editor of THE LANCET.

SIR,—Can any of your readers inform me how I should proceed in order to practise in Southern Europe? I am M.R.C.S. and L.S.A., but have no M.D., which, I believe, is more necessary for success abroad than in England. When at Nice two years ago I was told I should be required to pass some local examination before the authorities would allow me to practise there or along the Riviera; but I failed to learn the character of the examination, or whether it would entitle me to the qualification of "Dr." Are similar conditions imposed in Italy?—Rome or Florence for instance. I should feel much obliged for any information as to what I should do in order to practise in either of these places, or for advice as to any other suitable place in the South of Europe. Your obedient servant,

March, 1875. A LOVER OF THE SUN.

NOISELESS WHEELS.

WE have received from Messrs. Bird and Co., of Great Castle-street, a specimen of their patent tyres, intended to render carriage locomotion noiseless. They are well adapted for the purpose in view. The surface touching the ground appears to consist of vulcanised india-rubber, 9-24ths in. thick, cemented upon a layer of much harder material of ebonite of the same thickness, which is fixed to the wheels by bolts and screws. We have no doubt of their durability and efficiency, but the expense seems to be considerable.

THE DAVEY DEFENCE FUND.

FURTHER contributions received on behalf of the above Fund:—

Amount previously announced... ... £713 13 6

R. Stocker, Esq.	£1	10	0	Dr. J. P. Maberley, Leamington	1	1	0
Dr. J. Stocker	1	10	0	Messrs. Bageley & Horton, Devonport	0	10	6
Dr. W. R. Davies, Sanback	0	10	0	Frank Holmes, Esq., West Gorton	1	1	0
Dr. J. C. Doidge, Devon ...	0	5	0	G. May, jun., Esq., Reading	1	1	0
Dr. W. B. Clapham, Dunmow	1	1	0	A. Henderson, Esq., Great Malvern	1	1	0
Dr. S. Edwards, Kingsclere	0	10	0	Dr. S. H. Maul, Southampton	1	1	0
Dr. G. L. Sutton, West Auckland	1	1	0				
Dr. J. L. Jardine, Capels ...	1	1	0				
Dr. W. Carruthers, Runcorn	0	10	6				
Dr. J. Lidderdale, Kintbury	1	1	0				

A Reader.—It arises from various causes: from enlarged tonsils, for example, and sometimes from the position assumed during sleep.

Q. E. D.—Probably a letter which appears in our columns this week will afford our correspondent some useful hints on the subject.

THE ABERDEIN CASE.

WE exceedingly regret the decision of the High Court of Justiciary, and shall hope to notice the subject next week.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir G. Burrows, London; Dr. George Johnson, London; Dr. Headlam Greenhow, London; Prof. Struthers; Dr. Braxton Hicks, London; Prof. Lister, Edinburgh; Captain Bedford Pim, London; Mr. Greaves, London; Mr. Sydney Jones; Mr. Meeson; Mr. Busby, Brighton; Dr. Fayrer, London; Mr. Robinson, Darlington; Inspector-General Goodall; Dr. Dudgeon, London; Mr. Carr, Scarborough; Mr. Reilly, London; Mr. Godfrey, Jersey; Mr. Williams, Barrow-in-Furness; Dr. Strong, Croydon; Mr. R. Macnamara, Dublin; Mr. Gray, London; Dr. Moss, Dublin; Dr. Moxon; Mr. Basil Ringrose, London; Dr. Chambers, Indianapolis; Mr. Wylde, South Australia; Mr. Cassado, London; Mr. Smith, Matlock; Dr. Geo. R. Barnes, Ewell; Dr. Mackey, Birmingham; Mr. Metcalfe, London; Dr. Jagielski, London; Dr. Schumacher, Aix-la-Chapelle; Mr. Robinson, Dublin; Dr. Dudfield, London; Mr. Manby; Mr. Thornton, London; Dr. Hayward, Liverpool; Dr. Delstanche, Brussels, Mr. Norton, London; Dr. Milne, Edinburgh; Mr. Humphreys, London; Dr. Dobell, London; Dr. Fleming, Glasgow; Dr. Edis, London; Mr. Eyeley; Dr. Lyle, London; Dr. Cumming, Edinburgh; Mr. Camden, Rhyl; Surgeon-Major Yates Hunter, Bombay; Dr. Stephenson, Fawley; Dr. Coates, London; Dr. Welsh, Kinghorn; Messrs. Robertson and Scott, Edinburgh; Mr. Cubitt, Stroud; Dr. Smith, Wandsworth-road; Mr. Woodall, Scarborough; Mr. H. Sewell, London; Mr. Vernon, Sheffield; Messrs. Goddard and Massey, Nottingham; Dr. Taylor, Penrith; Messrs. Allen and Kitching, London; Dr. Sylvester, London; Messrs. Richardson and Co., Leicester; Dr. Mackintosh, Chesterfield; Messrs. Burgess and Willows, London; Mr. D. Green, London; Dr. Lloyd, Denbigh; Mr. Forward, Axminster; Mr. Thomson, Southall; Mr. Barlow, London; A Lover of the Sun; L.R.C.P.; A Country Surgeon; Registrar, Royal College of Physicians; A Decapitated Duck; M.D. Lond.; Sanitas; SENEX; J. W., Dublin; B. W.; A Readrr; &c. &c.

LETTERS, each *with enclosure*, are also acknowledged from—Dr. Hutchinson, Bishop Auckland; Mr. O'Brien, Glasgow; Mr. Watson, Birmingham; Mr. Turner, Norwich; Mr. Worger, Radstock; Mr. Longman, Sherborne; Dr. Edward, Bacup; Mr. Webb, London; Mr. O'Donnell, Waterford; Mr. Parkes, Grange-over-Sands; Mr. Farr, Plumstead; Mr. Appleyard, Wolverhampton; Dr. Shorts, Southampton; Mr. Morgans, Llanfabon; Mr. Jardine, Capel; Mr. Brend, New Buckenham; Mr. Warren, Tutbury; Dr. Akerman, London; Mr. Deane, Barrow-in-Furness; Mr. Moore, Brackley; Mr. Brettell, Dudley; Mr. Griffith, Dowlais; Mr. Friend, Kidderminster; Mr. Greaves, Weldon; Mr. Youldon, London; Mr. Driver, Lutterworth; Dr. Gaskell, St. Helens; Dr. Swanson, York; Mr. Harrison, Sheffield; Dr. Campbell, Chigwell; Mr. Smith, Rotherham; Mr. Hobson, Great Berkhampstead; Dr. Woodward, King's Lynn; Dr. Wiltshire, Sheffield; Mr. Gull, St. Helens; Mr. Mackintosh, Blackburn; Mr. Lyon, Willenhall; Mr. Lumsden, Glasgow; Mr. Sharp, Truro; Mr. Macdonald, London; Mr. Eddowes, Pontesbury; Dr. Hunter, Linlithgow; Mr. Kelly, Sontergate; Mr. Devonald, Cwmamon; Mr. Wall, Wigan; Mr. Kennedy, Hogsthorpe; Mr. Edmundson, Stokesley; Mr. Moxon, Northampton; Dr. Creed, Greenwich; Mr. Ryott, Newbury; Mr. Clements, Brighton; Mr. Hagge, Yeovil; Mr. Raye, Ledbury; Mr. Solly, London.

Newcastle Daily Chronicle, Welshman, Western Morning News, Metropolitan, Leeds Mercury, East London Observer, Huddersfield Daily Chronicle, Cork Constitution, Bradford Observer, Mansfield Reporter, Chorley Standard, Preston Chronicle, Malton Messenger, Isle of Man Times, Barrow Daily Times, and *Australian Register* have been received.

METEOROLOGICAL READINGS

(*Taken by Steward's Instruments*).

THE LANCET OFFICE, MARCH 24TH, 1875.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Mar. 19	30·15	W.	37	38	...	47	33	0·07	Raining
,, 20	30·15	N.E.	33	37	...	44	34	...	Overcast
,, 21	30·18	N.E.	35	40	...	43	36	...	Cloudy
,, 22	30·08	W.	36	38	...	50	36	...	Overcast
,, 23	30·32	E.	33	35	...	46	34	...	Cloudy
,, 24	30·37	W.	37	39	...	..	35	...	Overcast

Medical Diary for the ensuing Week.

Monday, March 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, March 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, March 31.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND. — 4 P.M. Prof. W. K. Parker, "On the Structure and Development of the Skull."

Thursday, April 1.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, April 2.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, April 3.

ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can only be forwarded as book packets, and *prepaid* as such.

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